

TAMILNADU SCIENTIFIC RESEARCH ORGANISATION, PUDUKKOTTAI - 622 003, TAMIL NADU



**Annual
Report
2020 - 21**



2020- 2021



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TamilNadu Scientific Research Organisation,
2021



24th Annual Report

Forward

*We have great pleasure in presenting you 2020-2021 annual report of **TamilNadu Scientific Research Organisation** (TNSRO). TNSRO is a registered institution, which is duly registered by the govt. of Tamilnadu under Indian Trust Act. TNSRO was started on 1997 by a group of social and scientific volunteers for the welfare of down trodden people. An institution has carried outstanding multi disciplinary activities in the field of science and society development. TNSRO has got registration from Income Tax department for 12A and 80G exemption under act 1961. TNSRO is a catalog organization working for the development of lower strata through the scientific application. Our organization to promote the advancement, transfer and sharing of scientific knowledge, science education, raise public awareness of sustainable development issues by launching co-operative activities with major groups. The institution is working for the application of science and technology in rural villages in Pudukkottai dist. Our main aim is to conserve our nature and propagate the simple scientific techniques for rural prosperity among the rural and scientific community since 1997.*

*In this mentioning period we could able to reach the unmet, unloved, uncared and unwanted communities through various programs with the support of government and from self-generated Local Communities contributions through fees. Since we keep the community in designing of an intervoention through proposal preparation, implementation, monitoring and evaluation we could able to achieve the desires and demands of the disadvantaged more comprehensiövely. In the mentioning year we considered huge need of climate change effect on the disadvantaged communities in their poverty eradication programs and livelihood sustainability. Considering this we have organized ourselves in energy and environment conservation, climate change mitigation practices and combat against exploitations. In harnessing the rich inherited knowledge and experience of poor we have planned to accommodate the most vulnerable and deprived communities in capacity building, cadre building and socio-economic and political empowerment. TNSRO in its journey through the development of disadvantaged sections continues with the support and coordination of humane people like you and local grant agencies. I am extremely indebted to present this annual report to the communities, supporters for the year 2020-2021. Because of communities participation our intervoentions have explored new corners. Our sincere and honest pledge to all of you and request the continuation of supports in the coming years as well. Together we would reach new heights and make productive changes in the lives of the deserved. Our institution has received Govt of Tamilnadu Best Institution Award (**Ariger Anna Award-State First Prize**) for 2011 environmental conservation and educational activities.*

I am extremely happy that this 2020-2021 period is a truly one of the big mile stone of our institution. Many of the programmes closely benefited to the community, especially in

Community Radio Programme. Programmes related to the students also conducted to this community. I express my hearty thanks to all donors, Govt. departments, Panchayat raj institutions, NGO friends and our institutional members for their valuable involvement for our achievements. We would continue to comply with the norms and regulations and legal aspects to demonstrate our transparency and accountability of the organization.

S.Vijikumar
Director



1. About us

TNSRO created a greater impact through various types of programmes in different field with the aspects of science and society development. Research and development programmes for villages. i.e. Water resource management, health and hygiene, forest and environment management and social welfare of the rural people. And also TNSRO has been organizing seminar and training workshops related our target issues. Publish and co-publishes books, reports and documents collection for information services, creates and supports other research and social networks of co-operating institution. A multi disciplinary team of TNSRO workers along with the experienced technical and other supporting staff are now pursuing their research and development, social awareness programmes in view of the various development problems of the target area.

The people of Pudukkottai dist. are economically, socially and educationally very backward, it is officially announced by the Govt. of Tamilnadu most of our target groups are belongs to SC/ST/MBC and their families earn livelihood by working as agricultural and constructional labours. The organization is encouraged in the service of the society by popularizing and enhancing public and students understanding of modern science & technology through interactive, popular lecture, exhibit, science club and research activities, thereby creating a scientific temper and social strength. The other sphere of our activity involves planning organization and contact of innovative activities towards education, Social Welfare, Health and Medicine, Rural Development through the scientific approach. The organization is thus involved in the planning organization and execution at rural development programmes.

The overall objective at the TNSRO is to provide expertise and assistance to rural maser in building their capacity to reduce poverty, tackle environmental problem, and assure responsibility for their health and pursuer education. The organization has developed infrastructures consisting at social workers, medical personals, and Para-medicals, to act with a holistic approach. Since India's seventy percent population lives in villages, the key to its long term growth and all round development lies in the development at its rural sector. Despite India's massive development achieved during the last decades, vast number of people still lives in object poverty, often without accepts to basic health care education, clean drinking water and sanitation, employment opportunities.

2. Organization Profile

1	Name of the Organization	TAMILNADU SCIENTIFIC RESEARCH ORGANISATION
2	Acronym	TNSRO
3	Registered Address	No.11, NAGAPPA ROAD, ARIMALAM- 622 201. Pudukkottai ,TamilNadu
4	Administration office Address	No. 39,Mura Bhavan, Koodal Nagar RajagopalapuramPost,Pudukkottai-622003 TamilNadu,India
5	Phone Nos.	04333-261088, 9952886637, 8778365515
6	E. mail Website	tnsroindia@gmail.com www.tnsroindia.org.in
7	Legal status (a) Nature of the organization (b) Registered Act (c) Regd.No. (d) Place of Registration	Registered Voluntary organization TRUST Indian Trust Act 1982 No:542/BK4/97 dated: 31.10.1997. District Registrar Office, Pudukkottai
8	Income Tax Registration (a)Tax Exemption Registration (b)80GG Registration No. (c)12AA Registration No. (d) Place of Registration (e) PAN Card No.	1961 6162E(33)/2002-03, 29.10.2002. 6162E(33)/2002-03, 29.10.2002. Commissioner of Income Tax-I, Tiruchirapalli. AAA TT 9322J dated: 04.11.1997
9	Affiliation	
	(a) For Science Popularization	Vigyan Prasar, Dept. of Science & Technology, NewDelhi. Affiliation No: VP-TN0090 Dated: 27.10.2017
10	Banking Details for TNSRO Name of the Bank A/c. No. Type of A/c Branch Code IFSC /RTGS Code	Indian Bank (IB) 850149667 Saving 1372, Rajagopalapuram IDIB000P137
10A	Banking Details for IJONS Name of the Bank A/c. No. Type of A/c Branch Code IFSC /RTGS Code	Indian Bank (IB) 892497210 Saving 1372, Rajagopalapuram IDIB000P137

11	Membership	Member in Tamilnadu Federation of voluntary Agencies, Chennai Regd.No.718/2007 Member in Network for Rural Development, Pudukkottai Dist.
12	NGO Partnership system	Registered with Planning Commission , Govt. of India. Unique ID.TN/2010/0031352
13	Chief Functionary/ Director	Dr.S. VIJIKUMAR Director, Tamilnadu Scientific Research Organisation No. 39,MuraBhavan,Koodal Nagar Rajagopalapuram Post,Pudukkottai-622003. TamilNadu, India

3.Vision and Mission of the Organization

Vision

To improve the resources of our nation and rural prosperity through the application of science & technology and also we dedicate the sustainable development of agriculture, ecology, health, education, employment and food security by the way of transferring valuable informations and action research with the community response and participation.

Mission

To provide expertise and assistance to rural community in building their capacity to reduce poverty, tackle environmental problem and promote sustainable agriculture, rural prosperity assure and responsibility for their health and pursuer education through science and technological application.

4.Objectives

- *To promote popularization of science & technology among the public and students by way of organizing awareness programmes, seminars, lectures, exhibitions, training Programmes and research activities.*
- *To identify areas for the applications of science & technology for the developmental needs, in particular, to the prevailing conditions of backwardness, rural, unemployment and poverty.*

- *To form and maintain farmers field schools, farmer's science clubs, students science club and youth clubs.*
- *To formulate and implement any successful environmental programme it is necessary to make it socially relevant*
- *To institute awards & fellowships for distinct fellow in the field of environmental conservation and science popularization.*
- *To formulate and implement the community based health promotional programmes.*
- *To conserve our biodiversity through the effective implementation plan.*
- *To promote and conduct research and development programmes in the field of health, environment, agriculture, education etc*
- *To publish research journals, books and local community news paper in the view of promotion of environmental science.*
- *To encourage the rural community in Sustainable Agriculture through Natural farming.*

Current Target Area: -Pudukkottai District and TamilNadu.

Major Target Groups: - Rural Communities, Small Marginal Farmers, Land less Farmers and labourer , Students, Youth groups, SC/ST weaker sections, Rural Teachers, Women groups, Techno entrepreneurs, Innovation groups, BPL groups, Children groups and under privileged groups etc.

TNSRO

5. Board of Managing Committee

S.No.	Name	Address	Qualification	Designation
1	S.Vijikumar	Plot No.1 , K.K Nagar, Kavinadu West, Rajagopalapuram post, Pudukkottai – 622 003, Tamil Nadu. 9952886637, 877 836 5515	D.Sc.(A.M.) FNVA.,	Director/ Managing Trustee.
2	V.Muthulakshmi	Plot No.1 , K.K Nagar, Kavinadu West, Rajagopalapuram post, Pudukkottai – 622 003, Tamil Nadu. 6381 112 637	D.M.L.T. FNVA. Fellow	Financial Trustee.
3	A.Gomathy Shankar	1/38, Sivapuram, Namanasamudram po, Thirumayam Tk, Pudukkottai 622 404 , Tamil Nadu 98420 07439	B.E.,	Trustee.

6.TNSRO Hierarchy



7. TNSRO working fields

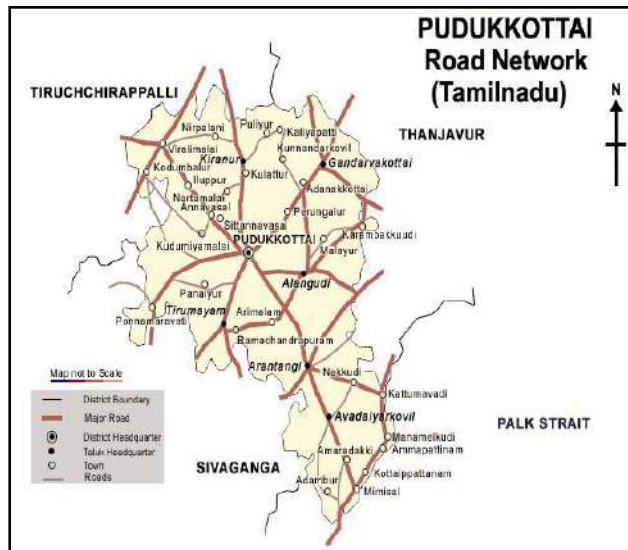
- Bose Science Society – Science popularization
- Bio tech for Villages – Village promotion through Biotechnology Climate change –IEC and Research Activities
- Conservation of Biodiversity.
- ICT for Rural Prosperity-Village Information Centre (VIC)
- Environmental Education and Conservation-Village Biodiversity School, Tree plantation, NEAC etc
- Vocational Education and Training - Self Employment Generation. Plant Science Research Division – Medicinal Plants Research
- Protection of Indigenous Culture and Knowledge System-Documentation and Research. Farmers Training School- Farmers Promotion and Development
- Publication and Library Division- Publish journals & Books, Library develop. Village Health Services-Free Medical Camps
- Disaster Risk Management- Training and Research
- Community Radio Programme

8. Staff Particulars

S.No.	Name	Qualification	Designation	Part time/ Full time
1	Dr.S.Vijikumar	D.Sc (AM),,FNVA.	Director	FT
2	Mrs.V.Muthulakshmi	B.A., MLT, FNVA	Project Officer	FT
3	Dr.E.S.Karthy	M.Sc., Ph.D., PGDBF	Research Associate	PT
4	Mr.K.Ramanathan	M.Sc.,M.Phil,	Research Associate	PT
5	Mr.C.Karthikeyan	M.Sc.,M.Phil.,	Administrative Officer	FT
6	Mis.V.Bhuvaneshwari	M.Sc.,M.Phil.,	Project Associate I	PT
7	Mis.V.Priyadarshini	B.Sc.,	Project Associate II	PT
8	Mis.C.Nagajothi	M.Sc.,	Project Assistant	FT
9	Mrs.Pichaiyammal	-	Sweeper	PT

9. Project Area Details

District Profile



Pudukkottai District was formed on 14 January 1974 by merging Pudukkottai revenue division of Trichy District and Arantangi and Avudayarkoil taluks of Thanjavur District. The district is bounded by Tiruchirappalli in the North and West, Sivagangai District in the South and Bay of Bengal and Thanjavur District in the East. The district lies between 9° 50' and 10° 40' of the northern latitude and 78° 25' and 79° 25' of the eastern longitude. It comprises 9 taluks, 13 development blocks and 764 revenue villages.

The district is generally a drought prone area an analysis of the rainfall data of the previous 10 years brings to light that expect for the three years of 1998, 2004 and 2005 the district witnessed deficient rainfall; and the deficiency ranged from 0.3 (1996) to 30% (2003). The total population of the district as per the 2001 census was 1459601 comprising 724300 males and 735301 females. There are 3 Major Rivers flowing through the district decides small rivers. However, they do not from the main source of irrigation as they are jungle streams and remain dry for most part of the year. As such, tanks are the major source of irrigation in the district, followed by canals and wells. The net irrigated area in the district is 70 percent of the net cropped area. The major food crop cultivated in the district is paddy covering around 1.02 lake hectares representing about 64 percent of the net sown area. Groundnut is the major oilseed crop grown in about 30500 hectares. The other crops include millets, pulses, sugarcane, banana, and cotton. The district is industrially backward. There is no industrially graded raw-material expect pockets of granite deposits. Irregular power supply and acute water shortage stand in the way of speedy industrialization. A sugar factory has been set up in the private sector which covers majority of the farmers growing sugar cane in the district.

Historical brief

Pudukkottai was formerly one of the princely states of India. It was under different dynasties during the first half of the 15th century and under Mughals till the 17th century. Thereafter Pudukkottai came under the suzerainty of the Thondaiman Kings who had

reined the state till it was merged with the Government of India after independence. The Thondaiman Kings were noted for the able and clean administration. During their rule they have augmented creation of irrigation sources for agriculture, evolved a sound revenue administration, education systems etc., the palatial administrative buildings for public offices constructed during their period are still remaining as monuments and serving the same purpose till date. The noted British administrator Alexander Loftus Tottenham was the administrative executive under the Thondaiman rulers. He evolved the famous "Tottenham System" of file maintenance and other office procedures, which are still being followed by government departments with a little change then and there.

Revenue Administration

There are two revenue Divisions namely Pudukkottai and Aranthangi. There are nine taluks and thirteen Panchayat unions with 763 revenue villages and 498 village panchayats. There are also two Municipalities and eight town panchayats in this District.

Soil Type

According to Geological reports rocks, granite, stone and limestone occurs in this District. White clay and other building stones are available in plenty.

Industries

Pudukkottai is one of the industrially backward district of Tamil Nadu. The total numbers of small-scale industries are 634.

Historical Architectural Monuments

There is one famous Shiva Temple at Avudaiyarkoil. It is internationally famous for its beautiful stone sculptures. Viralmalai in Madurai - Trichy High way is a pilgrim centre where a beautiful temple is situated over the hilltop for Lord Murugan. Sithannaval is a tourist attraction in this district, where one can see the rock beds and cave temples erected during the Samana period.

Road Communications

This District is sufficiently linked with other parts of the country with Railways and Highways.

General

The nature of the district is purely agrarian with the major crops Paddy, Banana, Sugarcane, Groundnut and cashew nut. There is an All India Pulses Research Station at the village "Vamban" and one State Agricultural farm at Kudumianmalai.

Predominant economic activities of the district

Agriculture is the predominant economic activity being pursued in the district. There are no major industries in the district. Dairy and goat/sheep rearing are the allied activities pursued in villages. Synthetic gem cutting is being done in Viralimalai block of the district. Stone and granite quarrying are the other economic activities worth mentioning.

Major food / commercial and plantation / horticulture crops

Paddy is the major crop cultivated in the district covering around 102750 hectares forming 64 percent of the net sown area followed by groundnut in an area of 30544 ha. The other major crops are sugarcane, millets, gingelly, cotton and pulses. Among the horticulture crops, cashew nut tops the list covering an area of about 15432 ha. Followed by coconut in an area around 4067 ha. Further, the district has around 6418 ha under fruit crops like mango, banana, acid line, etc. Vegetables are also cultivated in an area of 2586 ha. The area under sugarcane has been increasing since the commissioning of a sugar factory under private sector in the district.

Special/additional/other features of the district

Other economic activities include stone quarries, granite quarries, coir rope making, marine fishing, gem cutting, small business, mat weaving, pottery, pith work, etc.

Other factors affecting the district

The district is generally a drought prone area. The industrial progress in the district is sluggish due to low capital formation and absence if any raw material.

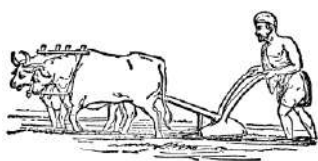
10. PROGRAMMES /ACTIVITIES 2020-2021

1.Medicinal Plants Conservation and Distribution Programme



Medicinal plants are globally valuable sources of herbal products, and they are disappearing at a high speed. Tamilnadu Scientific Research Organization under Plant Science Research Division cultivated many medicinal plants using conventional tissue culture method. The cultivated plants are converted as products and distributed to farmers . Traditionally there are lot of herbs used for the illnesses associated with one of a kind seasons. Although herbs were priced for his or her medicinal, flavoring and fragrant characteristics for centuries, the artificial merchandise of the present day age passed their significance, for a while. humans are returning to the naturals with wish of protection and security. It's time to sell them globally. He has created the significance of Medicinal vegetation Awareness to the humans and that they were given excellent expertise approximately the Medicinal vegetation conservation. Based on this , we organized a Medicinal Plants Conservation and Distribution programme on 08.04.2020, 07.06.2020, 09.10.2020, 10.12.2020, 22.01.2021.

2.Farmers' Programme



The messages to spread awareness amongst farmers, covered a wide range of topics such as transportation and secure storage of Crop Protection products, understanding the label, judicious and responsible use of Crop Protection products, personal health and hygiene, Tamilnadu Scientific Research Organization organized a programme to the Farmers of Pudukkottai District. This programme was conducted on 09.04.2020, 11.07.2020, 18.09.2020, 25.01.2021, 20.03.2021 at Arimalam, Melur, Othapuli Kudipuram. Dr.P.Sivakumar, Assistant Professor, TNAU, Eachankottai has participated in the programme and offered special address and he was given exposure to the farmers on various agricultural marketing reforms, modern marketing methods, direct marketing, group marketing, interface with the experts of commodities specialist and marketing personnel, ware housing, pledge financing .Farmers from these villages gained enough knowledge on this programme.

3.Covid-19 Awareness Generation Programme



The outbreak of the COVID-19 pandemic led to a massive loss of human lives and challenges to economies across the globe. Tamilnadu Scientific Research Organization generated a Awareness Programme on 06.05.2020, 09.07.2020, 16.09.2020 ,24.12.2020, 25.01.2021, 16.03.2021. S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the programme This programme mainly focussed on creating awareness to prevent covid-19 viruses . Many of the students interacted on this session.

4.Training Workshop on Covid-19



In those situations, use as many prevention strategies such as practicing hand hygiene, consistently and correctly wearing a high-quality mask, improving ventilation, and keeping your distance, when possible, from the person who is sick or who tested positive. Tamilnadu Scientific Research Organization conducted a Training Workshop on Covid-19. This workshop conducted on 21.04.2020, 22.04.2020, 18.06.2020, 20.08.2020, 11.12.2020, 19.01.2021, 16.03.2021. S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the programme. This workshop focussed on to train the people affected by the Covid -19.We guided the affected to take the swab test and RtPCR identification. Many people were attended this workshop and also learned the precautions of Covid -19.

5. Summer Research Programme



Many Students from UG and PG of different colleges came forward to TNSRO for Summer Internship Programme. Depending on their interests, summer training and research programs are conducted for the students. With the proper preparation in research methodology, we are beginning the summer research programs. The understudies may pursue research after completing the training program. Giving away a summer research program. Having conversations with the researcher and supervisor is a good way to enhance the learning experience. Encourage your interactions to take place in a lab. Both planned and unplanned social interactions are frequent in many labs. Because it "gives you a better feel for how they are in science," undergraduates should increase their knowledge of lab technologies and subsequent lab activities. Tamilnadu Scientific Research Organization conducted a summer research programme 08.10.2020. The students from JJ.College College of Arts & Science, Bharathidasan University were participated in the Summer Research Programme and they got complete ideas about the Research and development.

6. Skill Development Training Programme



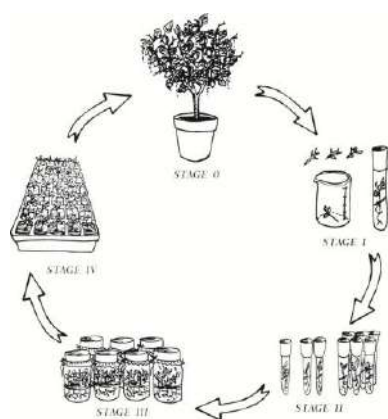
Women now have a considerable influence across all industries. The goal of female students is to succeed as great entrepreneurs. They are learning about financial aid and other programs for entrepreneurs. In contrast to the past, women can now play a significant part in all disciplines. Women can now actively pursue careers in industry, the medical profession, science, technology, and research. Tamilnadu Scientific Research Organization conducted a programme on Skill Development Training Programme. This program organized on 10.12.2020. A.Gomathy Shankar, Director, Roland Educare, Pudukkottai has special address in the programme. More than 100 students participated in the programme.

7. Herbal Garden Project



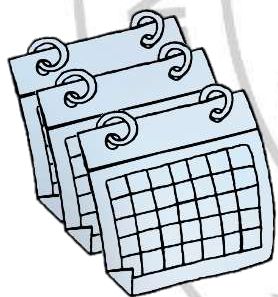
Herbal gardens serve as repository of medicinal plants, where the people can come and learn about the cultivation, harvesting and propagation of such crops. It gives the student a better understanding of medicinal value of plants. Not only is gardening relaxing but it also improves hand-eye coordination, motor skills and self-esteem. Herbs have many values but a few of the most common uses include aromatherapy, medicinal, as seasonings and flavorings in foods and beverages, and in salads. Tamilnadu Scientific Research Organization Organized a programme on 24.08.2020. Mr.Arangan, Former Teacher, Arimalam, Pudukkottai in the programme. More than 50 students were interacted in this programme. Herbal plants were cultivated through conventional tissue culture method under Plant Science Research Division. Cultivated plants are distributed to the farmers.

8. Tissue Culture Lab Project



Tissue culture (TC) is the cultivation of plant cells, tissues, or organs on specially formulated nutrient media. Under the right conditions, an entire plant can be regenerated from a single cell. Plant tissue culture is a technique that has been around for more than 30 years. Plant tissue culture is a collection of techniques used to maintain or grow plant cells, tissues or organs under sterile conditions on a nutrient culture medium of known composition. Plant tissue culture is widely used to produce clones of a plant in a method known as micropropagation. TNSRO conducted a six month lab project on Plant Tissue Culture. Students of B.Sc/B.Tech and M.Sc/M.Tech attended this project and learned many tissue culture techniques like micropropagation, molecular biology techniques. The students cultivated many medicinal plants through conventional tissue culture method. Dr.S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the project and guided the students for lab project. This programme was conducted on 10.10.2020.

9. Observation of National days Programme



A National day is a special day where people celebrate their country or nation each year. Tamil Nadu Scientific Research Organization conducted a programme on Observation of National Days. A lecture on National days like Republic day, Independence day, National Science day, Gandhi jayanti etc., were presented on that day. More than 100 participants were interacted. Dr.S.Vijikumar, Director, TNSRO, Pudukkottai was the chief guest and delivered the special address. The fifth of June is recognized as World Environmental Day each year. He stated that the United Nations' World Environment Day is the biggest annual event on the earth for promoting natural mindfulness among people. Its main goal is to raise awareness of issues among people to protect the environment by looking at many issues pertaining to serious issues of climate contamination, unusual climatic changes, nursery impact, a global temperature change, dark total impact, and so forth. He talked about Independence Day throughout his speech. Every year on August 15, we celebrate our nation's independence. He brings up the independence warriors and their way of life. He insisted that the youngsters support their country and serve in it.

10. Free Students Guidance Programme:



Free Students Guidance helps to shape a student's behaviour and also instill enough discipline in them. Proper guidance helps them achieve their goals, well guided & counseled students to know what to do and how to do things in the best possible way. 4. Students learn how to live in peace and harmony with others in the school community. Tamilnadu Scientific Research Organization organized a programme which was entitled as Free Students Guidance Programme .

This programme conducted on 13.04.2020, 12.06.2020, 16.09.2020, 09.12.2020, 14.02.2021. S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the programme and offered them with a motivational speech. School and college students of pudukkottai were participated in this programme. This programme mainly focused on a counselling that helps students choose the right career path based on their educational and professional choices.

11.Environmental Awareness program:



Environment underpins our economy, our society, indeed our very existence. Our forests, rivers, oceans and soils provide us with the food we eat, the air we breathe, the water we irrigate our crops with. We also rely on them for numerous other goods and services we depend on for our health, happiness and prosperity.

Tamilnadu Scientific Research Organization organized a programme on Environmental Education which was held on 20.04.2020, 03.06.2020, 09.10.2020, 08.01.2021. This program was conducted on Arimalam, Melur, Othapuli Kudipuram. S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai and Prof. K.Ramanathan, Assitant professor, Thanthai Hansroever College, Perambalur has presented in the programme. This programme encouraged the people to research and develop skills needed to protect and improve the environment. Director communicated with the people by delivered the lecture on Promoting urban agriculture. Encouraging healthy diets. Reducing and managing food waste. Boosting green spaces for healthier environments and improved lifestyles. Reconnecting cities with surrounding rural areas. More than 100 students people were participated in this programme.

12. Rare Endangered plants conservation programme:



The rate of plant extinction can be slowed down by using preserved seeds from uncommon species in reintroduction and conservation programs. Tamil Nadu Scientific Research Organization, Pudukkottai conducted a programme on Rare Endangered plants conservation. This programme organized on 19.05.2020, 14.07.2020, 20.09.2020, 22.11.2020, 25.11.2020. Manikandan, Teacher, Sri Kulapathi Balaiah Higher Secondary School, Pudukkottai in the programme and gave a lecture to students. This programme is mainly focussed on to identify and conserve Rare endangered plants. Director discussed to the students about the techniques of cultivating Rare endangered species. Techniques like Micropropagation used in the tissue culture which is the mass production of plants is also discussed. More than 100 students were participated.

13. Special lecture on Science Popularization Programme:



Learning science develops knowledge, problem solving skills, boost critical thinking, cultivates a passion for learning, uplifts many disciplines, holds the key to future and technology. Science also involves a lot of communication with other people and develops patience and perseverance in students. Tamilnadu Scientific Research Organization conducted a special lecture on Science popularization programme which is held on 24.05.2020, 16.07.2020, 10.09.2020, 06.11.2020, 18.12.2020. The school students of Sandhapettai, Pudukkottai took part in this programme. Dr.S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the programme and offered a lecture. The topics of knowledge, skills, techniques, discovery of science and technology were discussed with students. More than 100 students were participated.

14. Climate change Awareness Programme:



Awareness raising increases the knowledge of individuals, business and industry managers, organisations and decision makers. It aims to ensure that all relevant regional and sub-regional bodies understand the impacts of climate change, and take action to respond to certain impacts. In the view of this, Tamilnadu Scientific Research Organization conducted a programme on 13.04.2020, 13.08.2020, 16.12.2020, 16.02.2021. S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, and

G.Samynathan Pudukkottai has participated in the programme. More than 100 people were participated. Some of the activities related to conserve climate change were discussed . At last people pledged to conserve climate change.

15.Students Entrepreneurship Programme:



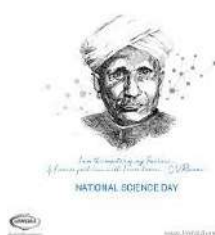
Pushkaram College and Tamilnadu scientific Research Organization oragnized a Student's Entrepreneurship programme which is held on 20.01.2021. S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the programme and gave lecture to the students. More than 175 students were participated. A variety of skills and competences that are useful in both the student's personal and professional lives are developed through entrepreneurship education. It teaches students how to spot problems, solve them, and take measured risks. It also trains them to think critically as well as imaginatively. This program created a innovative ideas which are transformed into enterprises initiated and managed by young people with the primary purpose of addressing their socio-economic challenges such as poverty and unemployment.

16.Biotechnology Training Programme:



Tamilnadu Scientific Research Organization under Plant Science Research Division conducted a short tem hands on training programme on 28.01.2021. Dr.S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the programme. The students of B.Sc/B.Tech , M.Sc/M.Tech students took part in this programme. Students learned basic biotechnology techniques like Molecular biology works, phytochemical analysis, bioanalytical techniques etc., This training program also helped the students to get opportunities of leading biotech companies. Biotechnology Training Program is to train students at the interface of basic and applied research, including the knowledge, skills, and experiences needed to develop and/or apply novel technologies towards understanding and addressing clinical needs in human health, physiology, and disease.

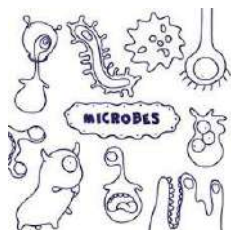
17.National Science Day Programme:



National Science Day is celebrated every year on 28 February to mark the discovery of the 'Raman Effect' by Sir C.V. Raman on 28 February 1928. It was this discovery that got Sir C.V. Raman a Nobel Prize in Physics in 1930.In the view of this, Tamilnadu Scientific Research Organization conducted a programme on National Science Day. This program completed on 26.02.2021. Dr.S.Vijikumar, Director, Tamil Nadu Scientific Research Organization, Pudukkottai participated in the programme and offered a lecture to the students. This programme conducted on

Sandhapettai school, Pudukkottai There are more than 80 students were participated on the programme. Simple Science Experiments were conducted to the students.

18. Microbial Fuel Pilot Study



A technology known as a microbial fuel cell (MFC) generates energy using the metabolic activities of microorganisms. Because MFCs can filter toxins out of wastewater and convert organic matter into power, they can be used in wastewater treatment plants. By using it to rebuild fuels, microbial fuel cells can help reduce atmospheric carbon dioxide and environmental pollutants like wastewater. They could also serve as a source of renewable energy. Microbes are used in microbial fuel cells to generate electricity. Today's air and soil contain fewer microbes than in the past. Tamilnadu Scientific Research Organization attempted a research on microbial fuel cell pilot study research on 12.05.2020. Dr.E.S. Karthy, Research Associate has participate in the programme . We cultivated many microorganisms which are useful in energy source.

19. Documentation of RET species Pilot study:



Protecting endangered species directly benefits human existence. Examples of how rare species sustain their ecosystems and human existence in several different, frequently surprising ways include keystone species and plants that enhance soil fertility. Endangered vegetation regulates the atmosphere's carbon dioxide/oxygen ratio, shelters a wide variety of plants, modifies the climate, lengthens the rainy season, and may even stop soil erosion. TamilNadu Scientific Research Organization under Plant science Research Division listed out some of the Rare Endangered Species of India on 26.06.2020. Dr.S.Alagumanian, Assistant Professor and HoD, Department of Botany, H.H.The Rajash's College, Pudukkottai has participated in the programme . We created awareness about the cultivation of Rare Endangered Species to the farmers and Distribution of plant products.

20. School of Holistic Health Sciences and Research



With the educational objective of providing top-notch instruction and therapeutic programs that make use of the mind and body's natural healing abilities through the use of acupuncture, Bach Flower Remedies, herbal remedies, and nature cure techniques, the TamilNadu Scientific Research Organization, (SHHSR) was established. The institution will offer therapeutic educational programs to aid individuals and professionals in gaining a deeper comprehension of and access to experiences of

perfect health, rejuvenation, transformation, and higher states of awareness as well as an improvement in skill-based training through distance learning and in-person training. In order to help students and practitioners achieve the highest level of proficiency and attainment of truth and knowledge in their chosen field of study—which can range from the most concrete studies on the physical plane to the most esoteric in the exploration of consciousness—the school makes an effort to provide qualified teachers and course materials. People of all ages have an incredible opportunity to learn in-depth about complementary and alternative medicine in this course. With the help of this course, students will gain a full understanding of numerous well-known natural and holistic treatments as well as the qualifications required to work as professionals in their fields. The TNSRO SHHSR's PG Diploma Program, which started in the academic year 2020–2021, graduated students with qualifications in holistic health science. Alternative medicine, which includes Bach flower therapy, aromatherapy, herbal treatments, biochemical treatments, and natural remedy methods, can control the sickness. Homeopathy, Ayurveda, Siddha, and English medicine are additional viable cures for a range of diseases.

The major objective is to develop skilled Holistic Health Therapists who can address a variety of issues. The public can obtain these medications via a rural community health center or an NGO. These courses are only offered through remote learning, however TNSRO is able to launch a postgraduate diploma program with a curriculum centered on rural holistic medicine and complementary therapies. A avenue is opened up for study in the area of holistic health medicines by TNSRO SHHSR. The main goal is to produce competent holistic health therapists who can handle a range of conditions. These drugs are available to the general population via an NGO or a rural community health facility. These courses are only available through distance learning, but TNSRO is able to start a postgraduate diploma program with a curriculum focused on rural holistic medicine and complementary therapies. TNSRO SHHSR has created a new research path in the field of complementary and alternative medicine.

21. Bose Science Society

1. Students Wing -The School Students can join in our society with free of cost
2. Professor Wing – The Professors, Scientists, Research Scholars are joined as a member in the Bose Science Society.

Every year, Bose Science Society consented to issue the awards to the Scientists, Professors and Research Scholars based on their qualification and research publications. Bose Science Society conducted Awareness Programmes to the School students every year. The

members from the professors wing may provide their contribution to the programmes in any way. There are 742 members in Bose Science Society joined as a Fellow Members.



22. Indian Journal of Natural Sciences-Research Publication



TNSRO has been publishing **Indian Journal of Natural Sciences -IJONS** from **August 2010**. Also the board of management approved the agenda for journal establishment with ISSN registration (0976-0997). The Journal is peer reviewed **International Bi monthly Journal** for publication of Original Research papers /Reviews/ Short communications/ Book reviews/Reports on conferences/ Seminar, Important events, News of interest etc. IJONS published by our Institution was running successfully. Famous Scientific Information, Research Solution have been published. Above 100 and above Scientists and Professors have joined as a

member from India and abroad.

Indian Journal of Natural Sciences was founded in 2010 and has a significant impact on the dissemination of research papers. We have so far released 64 issues. Numerous research papers were published in the Indian Journal of Natural Sciences by authors from our nation and other nations. In volumes 10 and 11, 2200 research and review papers were published. Agricultural, veterinary, geoscientific, mathematical, engineering and technology, information and communication, biotechnology, biomedicine, medical science, and computer science were the subjects of many of the study publications. These research publications pushed for environmental protection and the preservation of endangered plant and animal species. We are pleased to announce that Clarivate Analytics (Thomson Reuters) has included the Indian Journal of Natural Sciences in its index. Our Journal focused in various databases etc., we have applied for Index Copernicus IC value and got the impact factor of ISRA – 4.918, ISI -1.628 and Root Index - 5.79. More than 100 Professors and Scientists are Editorial Committee and Review Committee member in IJONS.

11.Partner Organizations



The TNSRO partners with select organizations. These partnerships vary in nature, depending on the identified need –and can be technical, financial or strategic. The Foundation maintains a broad network of contacts in all key areas, is constantly scouting for innovative rural technologies, and for the organizations doing high quality work in the area of rural development.

- Technical Partnerships–AWE Care analytical and Research Laboratories, Erode.
- Community Awareness - Rural Development Society, Gandarvakkottai
- Strategic Partnerships- Rural Development Organisation, Pudukkottai
- Educational support partnership- Bonsecurs College for women,Thanjavur,Holy Cross College, Trichy & Nagercoil
- NGO partner – Roland foundation,RDO,Pudukkottai.

12.MoU signing Institutions

Tamil Nadu Scientific Research Organization signed MoU with following Educational and Research Institutions in the period of 2020-2021

1. TNSRO has been MoU signed with Airmidia Broacost Solutions, Coimbatore for Research, Education and Training in Community Radio at Pudukkottai on 14.09.2020.
2. TNSRO has been MoU signed with Vivekanandha College of Arts and Science for Women, Elayampalayam, Tiruchengode, Namakkal Dist on 19.02.2020.
3. TNSRO has signed MoU with G.T.N Arts College,Dindigul on 08.03.2021 at TNSRO premises for collaborating research and educational work in the field of chemistry and other science disciplines and extension activities.

With this, Tamil Nadu Scientific Research Organization signed MoU with 18 Institutions. We have planned to establish Tissue Culture Technology, Medicinal Plants Conservation, Bioenergy Production and Bioproducts laboratory.



13. Awards and Appreciation for Environmental Education and Awareness



In 2013 our organization has received best institution award (**Aringer Anna Award**) from Department of Environment, Govt. Of Tamil Nadu for best efforts and services in the field of Environmental awareness and education since 1997. Our hon'ble minister of environment and forests Mr. Pachaimal issued to our hon'ble director. **Mr. Mallaseppa IAS**, Hon'ble director of environment and Principle secretary **Mr. Mohan Verghese Chunkath IAS** also appreciated our organizations best activities in the field of environment. Already our organization has received 2 times (2008 & 2010) from peace trust, regional resource agency, ministry of environment and forests, Dindigul for NEAC programme.

14. Future Plans and Activities

- Biodiversity conservation –flora and fauna species diversity Endangered conservation
- Publish books and magazines related biodiversity and environmental issues and medicinal plants.
- Sustainable Agriculture for Food security
- Popularize biotech application for rural prosperity
- Herbarium centre for research and conservation
- Phytochemical analysis for herbal drug research
- Climate change and water conservation
- Community Radio Programme.

15. Available Facilities

- Laboratory
- Research Papers Publication
- Textbook Publication
- Research Library with reference texts
- Training Hall
- Computer with Internet facility
- Herbarium
- Bioinformatics and other life science research facility etc.

Our Auditor

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Regd No. 200/27903.
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