#### TCE-ENVIS GREEN SKILL DEVELOPMENT PROGRAMME- WASTE MANAGEMENT

### **GSDP COURSE – BATCH -2021- 2022**

Course Name : Waste Management

Duration : 300 Hours

Inauguration Date : 17.11.2021

**Course Started** : 17.11.2021

Course Ended : 12.01.2022

Valedictory Date : 12.01.2022

No. Of. Participants: 18

Resource Person (Ext): 15

Resource Person (int): 13

Field Visit : 5

-----

Course Name : GSDP Course on Waste Management

Date of Inauguration : 17-11-2021

Chief Guest : Shri. Marachi Subburaman (Padma Shri Awardee)

#### **About the inauguration**

The Inaugural Function of GSDP course on waste management was held on 17<sup>th</sup> November 2021. The course was inaugurated by Padma Shri Awardee Marachi Subburaman. He is a social worker who is rendering services related to eco-friendly sanitation and water conservation for rural areas in India through a Non-governmental organization viz Society for Community Organisation and People's Education (SCOPE). He was recently awarded Padma shri award for his service to the society. In his inauguration speech he applauded the entire ENVIS team for their effort in conducting skill development program for unemployed youth of our country. He also expressed his gratitude to the MOEF & CC and GOI their support in organizing Waste Management Programme in TCE ENVIS centres all over the country.













The function is presided over by Shri. Karumuttu T.Kannan, Chairman and Correspondent TCE. The Chairman also insisted on the importance of younger generation and their role in developing a clean and green environment. He also appreciated the work done by TCE ENVIS team in conducting the GSDP Course at TCE ENVIS. He Personally thanked the MOEF & CC for allowing /funding TCE ENVIS RP for the conduct of the course.

In his speech Dr. R. Vasudevan, ENVIS Co-ordinator, elaborated the details and importance about the course. He also thanked the secretariat ENVIS and MOEF & CC for sanctioning the GSDP- 3<sup>rd</sup> Batch for TCE ENVIS RP. Principal, Head and Deans of the college were present at the function. The program was attended by the GSDP participants and the ME Environmental engineering students of the institute.

### 18.11.2021 Introduction to Solid Waste Management / Characteristics of Solid Waste

The FN Session of 18.11.2021 was handled by **Dr. G. Balaji**, Professor Dept. of Architecture, TCE. He discussed about the Introduction of Solid Waste Management and the importance of the course.





The AN Session was handled by **Ms. S. Vishalakshi., .,** Master Trainee GSDP student Batch 2020-21 and Ph.D Research Scholar, Dept of Botany, Thiagarajar College, Madurai. She discussed about the **Characteristics of Solid Waste and its composition.** 





19.11.2021 - Waste Management / Construction and Building Waste Management

The FN Session was handled by **Dr. R.K.C. Jeyakumar**, Asst. Prof, Dept. of Civil Engg., TCE. He had discussed about the Major concepts in Waste Management and also the importance of Waste Management. He also explained about the different properties on the solid waste.





The AN Session was handled by **Dr. R. Velkennedy.,** Professor Dept. of Civil Engineering., TCE. He discussed about the different concepts on the management of construction debris and the effective waste Management.





### 22.11.2021 - Remote Sensing and GIS / Source, Composition and properties of Solid Waste

The FN Session was handled by **Dr.R.A. Alaguraja**, Associate Prof., Dept. of ECE, TCE. He discussed about the basic concepts on Remote sense and GIS. He also told about how GIS & Remote Sensing helps in justify a sustainable waste management.





**The AN** Session was handled by **Dr. R.K.C. Jeyakumar**, Asst. Prof, Dept. of Civil Engg., TCE. He discussed about the **Source, composition and properties of Solid Waste** 





23.11.2021 - Integrated Solid Waste Management / Composting of Solid Waste

**The FN** Session was handled by **Dr. R.K.C. Jeyakumar**, Asst. Prof, Dept. of Civil Engg., TCE. He discussed about the **Integrated Solid Waste Management techniques and its importance.** 





The A/N Session was handled by: **Ms. S. Vishalakshi.,**, Master Trainee, GSDP student, Batch 2020-21 and Ph.D Research Scholar, Dept of Botany, Thiagarajar College, Madurai. She discussed about the Various Methods in Composting of Solid Waste





<u>24.11.2021 – Waste Management Video Session / Introduction to Waste Management / Separation and Processing of Solid Waste</u>

The FN Session: I - Video Session On Waste Management – ENVIS TEAM

**The F**N II Session was handled by **Dr. S. Ravisankar,** Assistant Professor Dept. of Civil Engineering., TCE. He discussed about the Waste Management Segregation techniques.





The AN Session was handled by **Dr. T. Velrajan**, Prof. & Head, Dept. of Civil Engg, TCE. He discussed about the **Separation and Processing of Solid Waste.** 





### 25.11.2021 - Circular Economy for Sustainable Future / Composting of Solid Waste

The FN Session was handled by **Dr. M. Kottaisamy,** Dean & HOD Prof, Dept. of Chemistry, TCE. He discussed about the concepts of **Circular Economy for Sustainable Future in Waste Management.** 





**The A**N Session was handled by **Ms. S. Vishalakshi., .,** Master Trainee, GSDP student, Batch 2020-21 and Ph.D Research Scholar, Dept of Botany, Thiagarajar College, Madurai. She discussed about the **Composting of Solid Waste** 



26.11.2021 - Solid waste Collection and Transport / Bio- Mass

The FN Session was handled by Dr. R.K.C. Jeyakumar, Asst. Prof, Dept. of Civil Engg., TCE. He discussed about the technologies on Solid waste Collection and Transportation of solid waste to dump yard. A group discussion was also connected among the students





Dr. S. Rajendran., Professor, Dept. of Botany, Saraswathi Narayanan College Madurai, handled a Lecture on **Bio-mass energy recovery** during the afternoon session.





### 29.11.2021 - Ecomac Magnetic MSW Decomposition Machine / Water scarcity in India challenges and Strategies - 1

The FN Session was handled by Mr. G. Bharanidharan., GSDP Student. He had discussed about the Municipal Solid Waste decomposition machine available in the market.





**The A**N Session was handled by **Dr. S. Chandran.,** Dean and Associate Professor, Dept. of Civil Engineering, TCE. He had discussed about the **Water scarcity in India, Challenges and Strategies** 





## 01.12.2021 – Ethics in Waste Management / Hazardous , Industrial & Solid Waste Management Rules & Regulations / Impact of Waste on Climate Change

The FN Session -I was handled by Padma Shri Dr. R. Vasudevan, Coordinator TCE ENVIS. He had discussed about the Ethics in Waste Management.





The FN Session -II was handled by Dr. V. Ravisankar, Assistant Professor Dept. of Civil Engineering., TCE. He discussed about the Solid Waste Management Rules & Regulations





The AN Session was handled by Mr. R. Manoj Prabakar, GSDP 1<sup>st</sup> batch Master Trainee., and an entrepreneur. He discussed about the Impact of Waste on Climate Change and also he shared his views about the GSDP course and its Importance.





### <u>02.12.2021 - Land Fill Municipal Solid Waste Management / Water scarcity in India challenges</u> <u>and Strategies</u>

The FN Session was handled by **Dr. G. Balaji,** Professor, Dept. of Architecture, TCE. He discussed about the **Land Fill Process in Municipal Solid Waste Management.** 





**The A**N Session was handled by **Dr. S. Chandran.,** Associate Professor Dept. of Civil Engineering, TCE. He discussed about the Importance of Water and Waste Water Management.





03.12.2021- Waste as Visual Feast/ Plastic Waste Management

The FN Session was handled by **Dr. S. A. V. Elanchezian,** Associate Professor, Dept. of Architecture., TCE. He discussed about the **Waste as Visual Feast** 





The AN Session was handled by Padma Shri Dr. R. Vasudevan, Coordinator TCE ENVIS. He had discussed about the Plastic Waste Management strategies.



06.12.2021- Fundamentals of GIS / Rural Sanitation and Waste Management

**The FN** Session was handled by **Dr. R. A. Alaguraja**, Associate Professor, Dept. of ECE, TCE. He discussed about the Basic concepts on the **Fundamentals of Geographic Information System (GIS)** 





The AN Session was handled by Padma Shri Awardee Mr. Marachi Subburaman, SCOPE Managing Trustee., Musiri, He discussed about the **Importance of Rural sanitation and Waste Management** 





## <u>07.12.2021- Rural sanitation and Waste Management / Status of Domestic Waste Water</u> <u>Management and Treated Effluent Standards in India and Global</u>

The FN Session was handled by Padma Shri Awardee Mr. Marachi Subburaman, SCOPE Managing Trustee., Musiri, He discussed about the **Methods to be followed in followings Rural sanitation and Waste Management** 





The AN Session was handled by Mr. Ganesh Kumar., Larsen & Toubro Limited, Mumbai. He discussed about the Status of Domestic Waste Water management and Treated Effluent Standards in India and Global.





### 08.12.2021 - Soil and Life / Plastic Waste Management

In the FN Session we have celebrated the Wold Soil Day 2021. **Dr. G. Balaji,** Professor, Dept. of Architecture, TCE delivered a guest lecture on Soil and Life. He discussed about the Importance of soil and how soil decides the life of a living Being.





The AN Session was handled by Padma Shri Dr. R. Vasudevan, Coordinator TCE ENVIS. He discussed about the Plastic Waste Management.



09.12.2021 - Field Visit to Sakthi Vermi Compost Unit / Waste Management Planning

The FN Session – Practical Field Visit to Sakthi Vermi Compost Unit - Vadipatti



**The AN Session was handled by Ms. Gimna Maria George,** Master Trainee Waste Management GSDP 1<sup>st</sup> Batch., Ph.D. Scholar., TCE. She **discussed about the Waste Management Planning** 

### 10.12.2021 - Waste Collection Models / Plastic Waste Management

The FN Session was handled by **Dr. R.K.C. Jeyakumar**, Assistant Professor, Dept. of Civil Engg., TCE. He discussed about the **Waste Collection Models**.





The AN Session was handled by Padma Shri Dr. R. Vasudevan, Coordinator TCE ENVIS. He had discussed about the **Plastic Waste Management and its Importance.** 



### 13.12.2021 - Electrical & Electronics in Waste Management / Circular Economy

The FN Session was handled by **Dr. K. Hariharan.**, Associate Professor Department of ECE, TCE. He discussed about the **Electrical & Electronics Waste Management concepts are the available techniques for its management.** 





The AN Session was handled by **Mr. R. Sudalai Muthu.,** GSDP 2<sup>nd</sup>Batch, Master Trainee and CEO of Enviro ozone. He discussed about the **Circular Economy and its Importance in Waste Management.** 





### 14.12.2021 - E Waste / Energy Conservation and Renewable Energy

The FN Session was handled by Mrs. K. Keerthy, Assistant Professor Dept. of Civil, TCE. She discussed about the **E Waste Management Techniques**.





In the AN Session we have observed the National Energy Conservation Day 2021, by organizing a special lecture on Energy Conservation Mr. V. Sivakumar, Proprietor, Alter Energy System, delivered a guest lecture on Energy Conservation. He also discussed about the Importance of Energy Conservation & Renewable Energy System.





### 15.12.2021 - Vermicomposting & Biogas Methods.

Dr. R. Kannan., Assistant Professor, Dept. of Agriculture, Kalasalingam Academy of Research Education, Krishnan Kovil, Virudhunagar Dist. He has handled the session on 15.12.2021. He discussed about the various concepts on Solid Waste Management Systems, Particularly on Vermicomposting and Bio Gas Manufacturing.





## 16.12.2021 - E Waste Recycle / Hazardous, Industries & Solid Waste Management Rules / Waste Water Treatment

The FN 1<sup>st</sup> Session was handled by Mrs. K. Keerthy, Assistant Professor Department of Civil, TCE. She discussed about the **Rule and Regulations to be followed Under E Waste Management.** 





The FN 2<sup>nd</sup> Session was handled by Dr. V. Ravishankar, Assistant Professor, Dept. of Civil Engineering, TCE. He discussed about the General Waste Management Rules and regulations as given by MOEF & CC, CPCB, guidelines.





The A/N session was handled by Dr. S. Chandran, Associate Professor Dept. of Civil Eng. TCE. He discussed about the Various Practical Concepts and methods to be followed on Waste Water Management.





### 17.12.2021 - Circular Economy for Solid Waste Management / Zero Waste Manage

Mr. R. Sudalai Muthu.,GSDP 2<sup>nd</sup> Batch Master Trainee and CEO Enviro ozone, has handled both the session on 17.12.2021. He discussed about the **Importance on Circular Economy to attain Zero Waste Management** 





# 18.12.2021 - Field Visit to Kalasalingam Academy of Research and Education, Krishnan Kovil, Srivilliputhur, Virdhunagar (Dist.)

Where the students, were given hands on Waste segregation and waste characterization. The students were also taken to the actual site of Vermicomposting and biogas plants.

















20.12.2021 - Strategic frameworks for climate change management /Mitigating Ideas for Climate Change and Air Pollution / Embark your Start up with Environment enables

The FN session was handled by Mr. R. Manoj Prabakar., Master Trainer Waste Management, Director King Institute for Agriculture and Research Training, Kerala. He discussed about the Strategic frameworks for climate change management and Mitigating Ideas for Climate Change and Air Pollution





The AN session was handled by **Dr. S. Balaji**, Assistant Professor, Department of Chemistry, TCE. His discussion was on the Topic **Embark your Start up with Environment enables.** He also addressed the participants on the scope on becoming an entrepreneur in Waste Management





# 21.12.2021 & 22.12.2021 - Two Days National Level Online Programme Urban Resilience <u>Using Sustainable and Ecological Concepts</u>

Two Days National Level Online Programme- "Urban Resilience Using Sustainable and Ecological Concepts", conducted by Department Architecture, TCE, on 20.12.2021 to 21.12.2021. GSDP Participant had participated in the virtual conference on Urban Resilience Using Sustainable and Ecological Concepts, Resource persons from foreign and Indian universities had delivered various lectures in the area of ecological concept and sustainable environment.

#### 23.12.2021 - Gandhiji and Green Environment / Bio mining

The FN session was handled by Dr. T. Ravichandran., Faculty Dept. of Gandhian Thought & Peace Science, & Director Museum of Constructive Programmes of Mahatma Gandhi, The Gandhigram Rural Institute – Deemed to be University. He discussed about the thought of sri Gandhiji on Green Environment. He had also spoke about the way in which Gandhiji had involved himself in the process of waste management.





The AN session was handled by Mr. G. Gowtham Sithaarth., an young entrepreneur, **Director**, **Linga Technologies**, **Coimbatore**. **He discussed about the Bio-Mining of Land fill Waste**.





<u>24.12.2021 - Plastic Waste in Solid Waste and Entrepreneurship Opportunities / E Waste Management</u>

The FN session was handled by Mr. V. Seenivasan., General Manager, YUNUS ENVIRONMENT HUB. He discussed about the **Plastic Waste in Solid Waste and Entrepreneurship Opportunities in Plastic Waste Management.** 





The AN session was handled by **Ms. S. Vishalakshi., .,** Master Trainee Waste Management GSDP 2<sup>nd</sup> Batch – Ph.D. Scholar Department of Botany Thiagarajar College. She discussed about the E Waste Management and its importance.





### 27.12.2021 - Bio - Medical Waste / Solid Waste Management

The FN session was handled by Dr. D. Kannan., Assistant Professor, Dept. of Botany., Thiagarajar College, Madurai., He discussed about the **Bio Medical Waste and Indigenous Knowledge Application in Wastes Management and Business Opportunities.** 





The AN session was handled by Mr. T. Krishnamoorthy., Managing Trustee., Green service, Chennai, He discussed about the **Solid Waste Management the Field effect.** 





28.12.2021 - Starting up Ideas on NGO/ Importance of Chemistry in Bio Trigger

Mechanism – the Science of Fluoride Removal.

The FN session was handled by Mr. R. Kamala Kannan., President, St Thomas Charitable and Educational Trust, Perundurai, Erode District. GSDP Current Batch Participant. He discussed about the ideas on Starting Up the NGO', related to Waste Management.





The AN session was handled by Dr. S. Sivailango., Assistant Professor, Dept. of Chemistry, TCE. He discussed about the compost of Municipal Solid Waste with help of **Bio Trigger Mechanism and The Science of Fluoride Removal and disadvantages of Fluoride In water.** 





### <u>29.12.2021 - Plastic Waste Management / Utilization of Waste Plastics for Flexible</u> Pavements

The FN session was handled by Dr. R. Vasudevan, Co-ordinator, TCE ENVIS RP, & Dean & professor., Dept. of Chemistry, TCE. He discussed about the Plastic Waste Management.





The AN session was handled by Dr. R. Velkennedy, Professor, Dept. of Civil Eng, TCE. He discussed about the **Utilization of Waste Plastics for Flexible Pavements.** 





### 30.12.2021 - Bio Medical Waste Management /E- Waste Management

Mr. R. Sudalai Muthu., GSDP 2<sup>nd</sup>Batch, Master Trainee and CEO of Enviro ozone. has handled the sessions on 30.12.2021. He discussed about the scenario of **Bio Medical Waste Management and E- waste Management** 





### 31.12.2021 – Plastic Waste Management / Entrepreneur ideas on Solid Waste <u>Management</u>

The FN session was handled by Dr. R. Vasudevan, Co-ordinator, TCE ENVIS RP, & Dean & professor., Dept. of Chemistry, TCE. He discussed about the Plastic Waste Management.





The AN session was handled by Mr. S. Gopinath., EDII TN entrepreneurship development and Innovative Institute, Field Co-ordinator., he discussed about the **Entrepreneur ideas on Solid Waste Management** 



# <u>03.01.2022 – Field Visit to Saraswathi Narayanan Arts and Science College/ Utilization of Waste Plastics for Flexible Pavements</u>

















The AN session was handled by Dr. R. Velkennedy., Professor, Dept. of Civil Eng. TCE. He discussed about the **Utilization of Waste Plastics for Flexible Pavements.** 





<u>04.01.2022 - Sustainable Waste Water Systems / Thermal Treatment / Plastic Waste</u> <u>Management</u>

The FN 1<sup>st</sup> session was handled by Dr. S. Chandran., Associate Professor, Dept. of Civil Eng. TCE. He discussed about the **Sustainable Waste Water Systems** 





The FN 2<sup>nd</sup> session was handled by **Dr. R.K.C. Jeyakumar.,** Assistant Professor, Dept. of Civil Eng. TCE. He discussed about the **Thermal Treatment** 





The AN session was handled by Dr. R. Vasudevan, Co-ordinator, Dean and Professor TCE. He discussed about the Plastic Waste Management.





<u>05.01.2022- Bio Medical Waste Management Rules and Regulation / Soil and Testing Lab</u>
The FN session was handled by **Dr. V. Ravishankar.,** Assistant Professor, Dept. of Civil Eng.
TCE. He discussed about the **Bio Medical Waste Management Rules and Regulation** 





The AN session was handled by Dr. R. Velkennedy., Professor, Dept. of Civil Eng. TCE. Visit to Civil department soil Testing lab. He discussed about the Soil testing methods.









# <u>06.01.2022 – Field Visit to Musiri. / Mr. M. Subburaman , Director, Society for Community</u> <u>Organization and People's Education (SCOPE) at Tiruchi, Tamil Nadu.</u>

















<u>07.01.2022 - Waste Management and Energy Conservation in Government Sectors / A strategy for improvement in waste management at men's hostel zone, TCE – Madurai.</u>

/Application of Indore model in Madurai / Investors Investment Planning and ideas on Entrepreneurship

The FN 1<sup>st</sup> session was handled by Mr. V. Divin Dravid, GSDP 3<sup>rd</sup> Batch Participant. He discussed about the **Waste Management and Energy Conservation in Government Sectors.** 



The FN 2<sup>nd</sup> session was handled by Mr. Sadanand Jaiswal, GSDP 3<sup>rd</sup> Batch Participant. He discussed about the **Application of Indore model in Madurai** 



The FN 3r<sup>d</sup> session was handled by Mr. G. Prakash, GSDP 3<sup>rd</sup> Batch Participant. He discussed about the **A strategy for improvement in waste management at men's hostel zone, TCE – Madurai.** 



The AN session was handled by Mr. S. Gopinath. EDII TN entrepreneurship development and Innovative Institute, Field Co-ordinator. He discussed about the **Investors Investment Planning and ideas on Entrepreneurship.** 



<u>08.01.2022- Field visit to GreenOWill Plastic waste Management Facility Centre at Srivilliputhur</u>

















### 10.01.2022 - Value Engineering / Lab Visit

The FN session was handled by Dr. M. Palaninatharaja, Principal, TCE. He discussed about the Value Engineering.





The AN session was handled by Dr. M. Kottaisami, Dean and HOD, Dept. of Chemistry, TCE. Visit to Chemistry department lab. He discussed about Plastic waste to fuel conversion.









### 11.01.2022 - Group Discussion and Participant Feedback / Assessment Test













### 12.01.2022 - Valedictory

TCE ENVIS RP has successfully started the course on "Waste Management" on 17-11-2021 and completed on 12-01-2022. In this regard I would like to inform you that the valedictory function of the course was held at TCE ENVIS seminar Hall on 12-01-2022.

- The function started with prayer
- Dr.M.Kottaisamy, Dean (Students), Prof & Head Department of Chemistry TCE, welcomed the dignitaries on the dais and off the dais and explained the objectives and the importance of the course.
- Dr.R.Vasudevan (Padmashri Awardee) Coordinator TCE ENVIS RP, Dean ECA, and Professor, Department of Chemistry, TCE, Presented the outcome of the course and also thanked the MoEF &CC for sanctioning the course.
- Dr.M.Palaninatharaja Director TCE ENVIS RP, Principal(i/c)I TCE, delivered the valedictory address. He thanked the MoEF&CC for their continued support. He stressed the importance of the course by enlightening the need for skill development. He also said that the

- central government is very kind enough to extend this course through educational institutions. This will definitely help the participants for their better future.
- ❖ Dr.K.Chockalingam, Registrar (Admin), Professor & Head Department of Mechanical Engineering, TCE delivered the felicitation address. In his address he explained the significance of the course and how it will be useful to develop entrepreneurship. He said that waste, the rejects, are many. In this training under GSDP you would have gained knowledge which will help you for a better future.
- Some of the participants recorded their feedback. In their feedback they said that this course is very useful and to many of us it opened a new outlook about the future
- ❖ Dr.A. Ramalinga Chandrasekar **Co-cordinator**, TCE ENVIS RP, Assistant Professor, Department of Chemistry TCE proposed the vote of thanks
- The Valedictory function came to a happy end with the National Anthem























