

## INDEX

### CRITERION: 3.1.3

**Details of Number of departments having  
Research projects funded by Government and  
Non-government agencies during the year 2022-23**

Sl. No.	Department	Page No.
1	Civil Engineering	03
2	Electronics and Communication Engineering	28

*P. P. S. S. S.*

*J. Ramesh*  
**PRINCIPAL**  
Kings College of Engineering,  
PUNALKULAM - 613 303.

Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/ Co-investigator	Department of Principal Investigator	Year of Award	Amount Sanctioned	Duration of the project	Name of the Funding Agency	Type (Government / non-Government)
Mission Amrit Sarovar – Jal Dharohar Sanrakshan (MAS-JDS)	<b>Dr.R.Saravanan</b>	Civil	2022-23	<b>Rs.2,00,000/-</b>	36 days	AICTE Mission Amrit Sarovar –Jal Dharohar Sanrakshan internship	Government
Student Project Proposal Scheme	<b>Mr.R.Balakrishnan</b>	ECE	2022-23	<b>Rs.7,500/-</b>	3 Months	Tamil Nadu State Council for Science and Technology, Chennai	Government

**All India Council for Technical Education**  
(A Statutory body under Ministry of Education, Govt. of India)  
Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: [www.aicte-india.org](http://www.aicte-india.org)  
**Sanction Letter**  
**AICTE Mission Amrit Sarovar – Jal Dharohar Sanrakshan Internship**



F.No.:- 1-1/NEAT/AMRIT/2022-23/ AMS-JDS - 81

Date: 26<sup>th</sup> July, 2022

To

The Drawing and Disbursing Officer,  
All India Council for Technical  
Education, Nelson Mandela Marg,  
Vasant Kunj, New Delhi - 110070

**Sub:** Release of a sum of **Rs. 1,00,000/- (Rupees One Lakh Only)** being the 1<sup>st</sup> installment **Grant-in-Aid** under the **Mission Amrit Sarovar – Jal Dharohar Sanrakshan** for the duration 1<sup>st</sup> July 2022 to 5<sup>th</sup> August 2022 and payable during the current financial year **2022-23**- reg.

Sir/ Madam,

With reference to the Mission Amrit Sarovar Jal Sarovar Sanrakshan Internship, for the participating institute, this is to convey that the sanction of the Council for payment of **Rs. 1,00,000/- (Rupees One Lakh Only)** as sanctioned Grant-in-Aid under the **Mission Amrit Sarovar Jal Dharohar Sanrakshan**, as per details given below:

1.	Name and address of the Beneficiary Institution:	Kings College of Engineering Punalkulam, Gandarvakottai Taluk, Pudukkottai District, Tamil Nadu 613 303
2.	Scheme under which grant is to be released	<b>Mission Amrit Sarovar – Jal Dharohar Sanrakshan (MAS-JDS)</b>
3.	Water Body Allocated	Sembirankulam
4.	Name of Head of Institute (HOI):	Dr. J. Arputha Vijaya Selvi
5.	Name of Institute Nodal Officer (INO):	Dr. R. Saravanan
6.	Duration of the project:	1 <sup>st</sup> July 2022 to 5 <sup>th</sup> August 2022
7.	Total Budget allocated for Each Water Body	<b>Rs. 2,00,000/- (Rupees Two Lakh Only)</b> 1 <sup>st</sup> Installment (being of 50%) – Rs. 1,00,000/- 2 <sup>nd</sup> Installment – Rs. 1,00,000/-
8.	Sanctioned Grant-in-Aid is debitible to:	<b>601.23 (a)</b>

- (i) The amount of the Grant shall be drawn by the Drawing and Disbursing Officer, All India Council for Technical Education on the Grant-in-Aid bill and shall be disbursed to and credited to the account of Director/ Principal/ Registrar of the Institute through RTGS.
- (ii) This Grant-in-Aid is being released in conformity with the terms & conditions as well as guidelines of the Jal Dharohar Sanrakshan Internship guidelines as already communicated, and also being communicated in this letter.

The instructions/ guidelines linked with Mission Amrit Sarovar – Jal Dharohar Sanrakshan (MAS-JDS), to be followed by University/ Institution are as given below:

**I. Release of funds**

- a The sanction is issued in exercise of the powers delegated to the Council and other terms & conditions laid down in the

1-1/NEAT/AMRIT/2022-23/ AMS-JDS/ 81

guidelines of the Scheme.

- b. AICTE shall transfer a total sum of Rs. 2 lakh to each of the identified institutes, in two installments of Rs. 1 lakh each prior and Rs. 1 lakh on completion of the activities.
- c. 50% of the sanctioned amount is being released as first installment followed by 50% as second installment upon completion of Internship and submission of Final deliverables like Posters, reports etc..
- d. Participating Institutions shall utilize these funds for
  - (i) A fixed amount of Rs. 1, 50,000 are earmarked solely for student stipend. No further funds will be allocated to the institute for this purpose. Disbursement of the stipend of Rs. 10,000/student for all participating students/interns
  - (ii) A fixed amount of Rs. 30,000 shall be paid to the sole INO/Institution Faculty assigned to the Water Body and who shall mentor and support participating interns during the internship.
  - (iii) Additional amount of Rs. 20,000 will be disbursed to each INO/Mentor for covering travelling expenses, other project related poster costs etc.
- e. Other financial internship modalities with regards to eligible budget for each participating institutions, basis the number of selected students are detailed as per the approved **Mission Amrit Sarovar\_Jal Dharohar Sanrakshan\_SOP** document.

## II. Maintenance of accounts

- a. The University/College/Institute shall maintain proper accounts of the expenditure out of the grants, which shall be utilized only on approved items or expenditure identified in the Scheme document.
- b. The Council shall receive Utilization Certificate by the Institute upon completion of Internship to satisfy that the fund has been utilized for the purpose for it was sanctioned.
- c. Any balance amount of the sanctioned amount remaining on completion of internship shall be mentioned in the Utilization Certificate provided by the institute and shall be remitted back to AICTE.

## III. The University/college/institution shall submit the related documents i.e. Utilization Certificate, Completion Report, etc. by 5<sup>th</sup> August 2022.

- a. The **Internship Deliverables – Poster Submission / Photos** – shall be uploaded by the INO in the prescribed format on the provided Google Form links shared by AICTE by the submission deadline of 5<sup>th</sup> August. Feedback of student & INO performance will be taken from INO.
- b. 2<sup>nd</sup> Installment shall be disbursed only to those institutions who have completed the aforementioned submission within the stipulated time frame.
- c. The **Utilization Certificate (UC)** must be provided by the Institute to the effect that the grant has been utilized for the purpose for which it has been sanctioned shall be furnished to the AICTE after completion of the Internship and after paying Stipend to students and monetary compensation to INO. It should contain the head-wise break up of expenditure made from the grant-in-aid provided by the Council. Audited Statement of Expenditure indicating expenditure incurred in the total duration of the project in the prescribed format and GFR-22 shall be submitted to the Council.
- d. In case of self-financing/private institutions, Utilization Certificate authorized by HOI shall be submitted to AICTE.
- e. Project completion report (PCR) of the project indicating the activities undertaken, number of students benefited, photographs, together with their feedback is to be submitted.

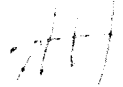
NOTE: For project petty expenses (travel & lodging) (Rs. 20,000 per water body) there is no requirement of submitting any bills

## IV. General instructions

- a) HOI/INO shall be responsible for execution, completion and submission of the deliverables of the Internship.
- b) The grant shall be utilized strictly for the purpose as specified in the Sanction letter.
- c) AICTE shall not consider any request for additional grants. Institute will invest funds for completion of the Internship in case there is a shortfall of money. Separate institutional overhead expenses shall not be provided by AICTE.
- d) The Institute shall furnish to AICTE, Utilization Certificate authorized by the HOI.

- e) AICTE will have no responsibility in case any loss is caused to any life or property due to accident, fire or any other reasons. The institute is required to take appropriate safety and insurance measures to safeguard against any loss to human life and property.
- f) The second installment amount will be disbursed only after submission of mandatory final internship project submissions.
- g) Condition to refund the amount along with interest may be included in the sanction order in case Institute does not take up the work or submit the final reports within stipulated time frame.

Yours sincerely,

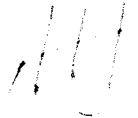


**Dr. Buddha Chandrasekhar**  
CCO (NEAT)

Copy forwarded for information and necessary action to:

1. The Director/ Principal/ Registrar,  
Dr. J. Arputha Vijaya Selvi  
Kings College of Engineering  
Punalkuram, Gandarvakottai Taluk, Pudukkottai District, Tamil Nadu 613 303

**2. Guard File**



**Dr. Buddha Chandrasekhar**  
CCO (NEAT)

**All India Council for Technical Education**  
(A Statutory body under Ministry of Education, Govt. of India)  
Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: [www.aicte-india.org](http://www.aicte-india.org)



**Sanction Letter**  
**AICTE Mission Amrit Sarovar – Jal Dharohar Sanrakshan Internship**

F.No.:- 1-1/NEAT/AMRIT/2022-23/ AMS-JDS - 314

Date: 22<sup>th</sup> August, 2022

To

The Drawing and Disbursing Officer,  
All India Council for Technical  
Education, Nelson Mandela Marg,  
Vasant Kunj, New Delhi - 110070

**Sub:** Release of a sum of **Rs.100000/- (Rupees One Lakh Only)** being the 2<sup>nd</sup> installment eligible amount **Grant-in-Aid** under the **Mission Amrit Sarovar – Jal Dharohar Sanrakshan** for the duration 1<sup>st</sup> July 2022 to 5<sup>th</sup> August 2022 and payable during the current financial year **2022-23-** reg.

Sir/ Madam,

With reference to the Mission Amrit Sarovar Jal Sarovar Sanrakshan Internship, for the participating institute, this is to convey that the sanction of the Council for payment of 2<sup>nd</sup> installment eligible amount of **Rs.100000/- (Rupees One Lakh Only)** as sanctioned Grant-in-Aid under the **Mission Amrit Sarovar Jal Dharohar Sanrakshan**, as per details given below:

1.	Name and address of the Beneficiary Institution:	Kings College of Engineering Punalkulam, Gandarvakottai Taluk, Pudukkottai District, Tamil Nadu 613 303
2.	Scheme under which grant is to be released	<b>Mission Amrit Sarovar – Jal Dharohar Sanrakshan (MAS-JDS)</b>
3.	Water Body Allocated	Sembirankulam
4.	Name of Head of Institute (HOI):	Dr. J. Arputha Vijaya Selvi
5.	Name of Institute Nodal Officer (INO):	Dr. R. Saravanan
6.	Duration of the project:	1 <sup>st</sup> July 2022 to 5 <sup>th</sup> August 2022
7.	Total Budget allocated for Each Water Body	<b>Rs. 2,00,000/- (Rupees Two Lakh Only)</b> 1 <sup>st</sup> Installment – Rs. 1,00,000/- 2 <sup>nd</sup> Installment Balance Eligible Amount – Rs.100000/-
8.	Sanctioned Grant-in-Aid is debitable to:	<b>601 23 (a)</b>

- (i) The amount of the Grant shall be drawn by the Drawing and Disbursing Officer, All India Council for Technical Education on the Grant-in-Aid bill and shall be disbursed to and credited to the account of Director/ Principal/ Registrar of the Institute through RTGS.
- (ii) This Grant-in-Aid is being released in conformity with the terms & conditions as well as guidelines of the Jal Dharohar Sanrakshan Internship guidelines as already communicated, and also being communicated in this letter.

The instructions/ guidelines linked with Mission Amrit Sarovar – Jal Dharohar Sanrakshan (MAS-JDS), to be followed by University/ Institution are as given below:

**I. Release of funds**

- a. The sanction is issued in exercise of the powers delegated to the Council and other terms & conditions laid down in the

1-1/NEAT/AMRIT/2022-23/ AMS-JDS/ 314

guidelines of the Scheme.

- b. AICTE shall transfer a total sum of Rs. 2 lakh to each of the identified institutes, in two installments of Rs. 1 lakh each prior and Rs. 1 lakh on completion of the activities.
- c. 50% of the sanctioned amount is being released as first installment followed by 50% as second installment upon completion of Internship and submission of Final deliverables like Posters, reports etc. and as per eligible amount based on number of participating students.
- d. Participating Institutions shall utilize these funds for
  - (i) A fixed amount of Rs. 1, 50,000 are earmarked solely for student stipend. No further funds will be allocated to the institute for this purpose. Disbursement of the stipend of Rs. 10,000/student for all participating students/interns
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## III. The University/college/institution shall submit the related documents i.e. Utilization Certificate, Completion Report, etc. by the stipulated due date.

- a. The **Internship Deliverables – Poster Submission / Photos** – shall be uploaded by the INO in the prescribed format on the provided Google Form links shared by AICTE by the submission deadline of 5<sup>th</sup> August. Feedback of student & INO performance will be taken from INO.
- b. 2<sup>nd</sup> Installment shall be disbursed only to those institutions who have completed the aforementioned submission within the stipulated time frame.
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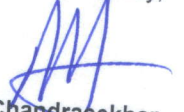
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Yours sincerely,



Dr. Buddha Chandrasekhar  
CCO (NEAT)

Copy forwarded for information and necessary action to:

1. The Director/ Principal/ Registrar,  
Dr. J. Arputha Vijaya Selvi  
Kings College of Engineering  
Punalkulam, Gandarvakottai Taluk, Pudukkottai District, Tamil Nadu 613 303

**2. Guard File**



Dr. Buddha Chandrasekhar  
CCO (NEAT)





Dr. J. Arputha Vijaya Selvi, M.E., Ph.D.,  
**PRINCIPAL**

Ref: KCE / PRL / internship/ 108 /22-23

23.12.2022

To  
**The Chief coordinating officer,**  
Jal Dharohar Sanrakshan Internship,  
AICTE,  
New Delhi.

Sir,

Sub: Submission of Utilization certificate – reg.,

Ref: Annexure I of O.M.No K-14O11/16/2017-AMRUT-II A dated 26th July 2022

With reference to the above, herewith, we are submitting the fund utilization certificate for the JAL DHAROHAR SANRAKSHAN INTERNSHIP for your kind perusal.

Thank you,

Regards,

Dr. J. Arputha Vijaya Selvi

*J. Arputha*  
23/12/2022

Encl : Utilization Certificate

**PRINCIPAL**  
Kings College of Engineering,  
PUNALKULAM - 613 303.

**UTILISATION CERTIFICATE FOR THE FINANCIAL YEAR 2022-2023**  
**Mission Amrit Sarovar - Jal Dharohar Sanrakshan (MAS-JDS) Internship**

Date: 23<sup>rd</sup> December 2022

Name of the Institute: **KINGS COLLEGE OF ENGINEERING, PUNALKULAM**

Allotted Water Body Name: **SEMBIRANKULAM**

Serial Number as per Annexure I of O.M.No K-14011/16/2017-AMRUT-II A dated 26<sup>th</sup> July 2022:

Name of the Scheme under which the amount was sanctioned under the **Mission Amrit Sarovar - Jal Dharohar Sanrakshan (MAS-JDS) Internship.**

Sl. No	AICTE Sanction Order/Letter No.(s) & Date under which the amount was sanctioned	Installment Amount Received (Rs.)	Total Amount Received (Rs.)	Remarks
1	2	3	4	5
1	1-1/NEAT/AMRIT/2022-23/ AMS-JDS/ 81 & 26 <sup>th</sup> July 2022	1,00,000	2,00,000	Certified that out of Grant-in-Aid of <b>Rs. 2,00,000</b> sanctioned by the AICTE during the financial year 2022-2023 in favor of <b>KINGS COLLEGE OF ENGINEERING</b> , as per letter mentioned in column 2, <b>Rs. 2,00,000</b> has been utilized for the purpose for which it was sanctioned and the balance of <b>Rs. 0</b> remained unutilized.
2	1-1/NEAT/AMRIT/2022-23/ AMS-JDS/ 314 & 22 <sup>nd</sup> August 2022	1,00,000		

Certified that I have satisfied myself that the conditions on which the amount was sanctioned have been duly fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised: -Audited Annual Accounts of the Institute, Receipt and Payment account

**A. SOUNDARARAJAN B.Sc., F.C.A.**  
**CHARTERED ACCOUNTANT**  
M. NO. 022701

9, 2nd Main Road CIT Colony  
Mylapore, Chennai - 600 004.

Full Address with Seal  
(Mandatory for Self Financing Institutes)

Signature of Chartered Accountant  
Membership No.:022701

Signature of Head of the Institute

**A. Soundararajan**  
Name of Chartered Accountant Principal

Signature of the Institution's Finance Officer  
Name of the Finance Officer

**MANAGER (Accounts)**  
**KINGS COLLEGE OF ENGINEERING**  
PUNALKULAM - 613 303,  
GANDARVAKOTTAI TALUK, PUDUKOTTAI DISTRICT.

Name of Head of the Institute & Official Seal

**Dr. J. Arputha Vijaya Selvi,**  
B.E., M.E., Ph.d.  
**PRINCIPAL**  
Kings College of Engineering  
Punalkulam - 613 303.

**FORMAT FOR RECEIPT AND PAYMENT ACCOUNT**

RECEIPT				PAYMENT			
Sl. No.	Receipt	Opening Balance - Amount (Rs.)	Closing Balance - Amount (Rs.)	Sl. No.	Payments	Amount (Rs.)	Amount (Rs.)
1	To Opening Balance	0/-	0/-	1	Mission Amrit Sarovar - Jal Dharohar Sanrakshan (MAS-JDS) Internship	0/-	2,00,000/-
2	Total Eligible Amount Received under Mission Amrit Sarovar - Jal Dharohar Sanrakshan (MAS-JDS) Internship	2,00,000/-	2,00,000/-	2	Student Stipend (Detailed in Annexure-I)	0/-	1,50,000/-
				3	INO Monetary Compensation (Detailed in Annexure-I)	0/-	30,000/-
				4	Project Expense - Travel, Poster Printing etc.	0/-	20,000/-
	<b>Grand Total</b>	<b>2,00,000/-</b>	<b>2,00,000/-</b>		<b>Grand Total</b>	<b>0/-</b>	<b>2,00,000/-</b>

**A. SOUNDARARAJAN B.Sc., F.C.A.  
CHARTERED ACCOUNTANT**

**M. NO. 022701**

**9, 2nd Main Road CIT Colony  
Mylapore, Chennai - 600 004.**

**(Mandatory for Self Financing Institutes)**

*[Signature]*  
Signature of Chartered  
Accountant  
Membership No.:022701

*[Signature]*  
Signature of Head of the  
Institute

**A. Soundararajan**  
Name of Chartered  
Accountant Principal

*[Signature]*  
Signature of the Institution's Finance Officer  
Name of the Finance Officer

**MANAGER (Accounts)  
KINGS COLLEGE OF ENGINEERING  
GANDAPPAURTAI (VILVA) POLSUKKUM DISTRICT.**

Name of Head of the  
Institute & Official Seal

**Dr. J. Arputha Vijaya Selva**  
B.E., M.E., Ph.D.  
**PRINCIPAL**  
**Kings College of Engineering**  
Puralkulam - 613 303.

**ANNEXURE - I**

<b>INO Compensation Payment Details</b>				
<b>S.No.</b>	<b>INO Name</b>	<b>Mode of Payment</b>	<b>Account Number</b>	<b>Compensation Paid (Rs)</b>
1	Dr.R.SARAVANAN	RTGS	136401000015804	30,000.00

<b>Student Stipend Payment Details</b>				
<b>S.No.</b>	<b>Student Name</b>	<b>Mode of Payment</b>	<b>Account Number</b>	<b>Stipend Paid (Rs)</b>
1	AGALYA B	RTGS	5022108000289	10,000.00
2	ANBUMANI S	RTGS	6852903442	10,000.00
3	DIVYA S	RTGS	6359001683	10,000.00
4	JANANI T S	RTGS	05350100015018	10,000.00
5	JAYACHANDRAN N	RTGS	285801000002831	10,000.00
6	JAYASEELAN M	RTGS	6441703496	10,000.00
7	KURALARASAN R	RTGS	34371213538	10,000.00
8	MADHUMITHA R	RTGS	6480377612	10,000.00
9	MONIKA M	RTGS	6365755806	10,000.00
10	RENGESWARI R	RTGS	6854727677	10,000.00
11	RUBIKA M	RTGS	136401000030817	10,000.00
12	SANTHOSH S	RTGS	6252495015	10,000.00
13	SATHYA P	RTGS	35074998263	10,000.00
14	STALIN P	RTGS	1854120000040	10,000.00
15	DANIEL NAVIS F	RTGS	275301000011705	10,000.00

*J. Arputha Selvi*

Signature & Seal of Head of the  
Institute

Name of Head of the Institute  
**Dr. J. Arputha Vijaya Selvi,**  
B.E., M.E., Ph.d.  
**PRINCIPAL**  
Kings College of Engineering  
Punaikulam- 613 303.



**Ministry of Education**  
Government of India



**Ministry of Housing  
and Urban Affairs**  
Government of India



## **MISSION AMRIT SAROVAR**

### **JAL DHAROHAR SANRAKSHAN INTERNSHIP**

Institute Name: **KINGS COLLEGE OF ENGINEERING**

Water Body Name: **SEMBIRANKULAM**

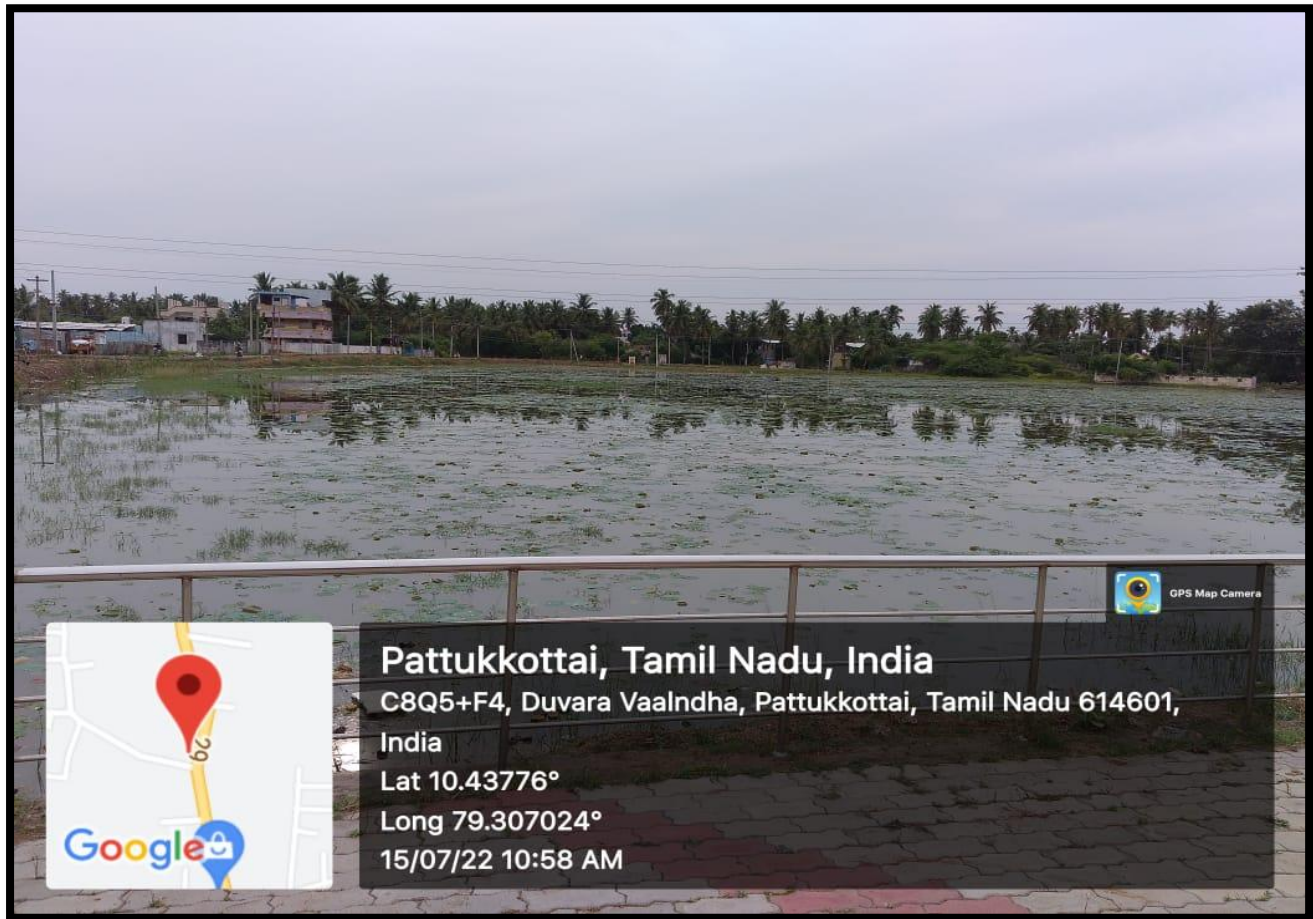
INO Name: **Dr. R.SARAVANAN**

Period of Report: **15th July 2022 – 02nd AUGUST 2022**



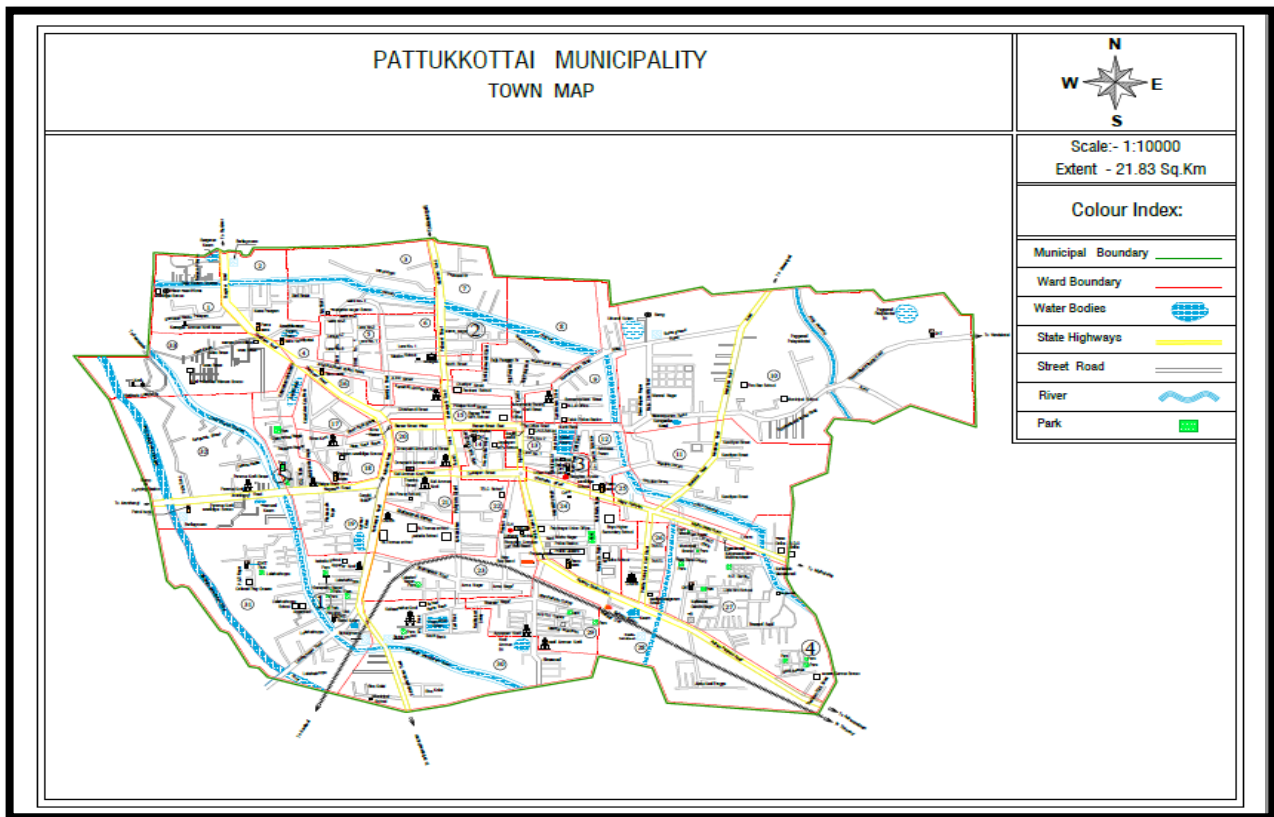
## **DETAILED PROGRESS REPORT**

## HISTORY & ORIGIN:



- ✓ **SEMBIRANKULAM** is a water body situated in Pattukkottai block of Thanjavur district in Tamil Nadu.
- ✓ It is situated in rural part of Thanjavur district of Tamil Nadu.
- ✓ It is located in Aladikkumulai, one of the 56 villages of Pattukkottai Block of Thanjavur district.
- ✓ **SEMBIRANKULAM** water body is the ancient water body in Pattukkottai block covering 6 acres (23500 sqm) and maximum depth is said to be 15 feet.
- ✓ It's origin is around 150 years ago. Based on the survey from local people the water body was initially maintained by local Jamin Shri.Muthu Nayakkar,

## HISTORICAL CONTENT & GEOGRAPHICAL SETTING:



- ✓ **SEMBIRANKULAM** water body is located at  $10.43776^{\circ}$  Latitude and  $79.307024^{\circ}$  Longitude covering an area of 23118 sqm.
- ✓ The area was calculated using total station survey. As per the survey from the local people, the boundary area has been gradually reduced.
- ✓ From the data gathered, it is learnt that, the main source for this water body is the channel from Kattaru river.
- ✓ There are 2 inlets in the water body leading from the sub-channels from Kattaru river.
- ✓ Since the water is untidy and due to the presence of garbage, plastic wastes and algae, physical measurement of depth of the water body was not carried out.
- ✓ But from the people's voice, the depth of the water body is said to be 15 feet.





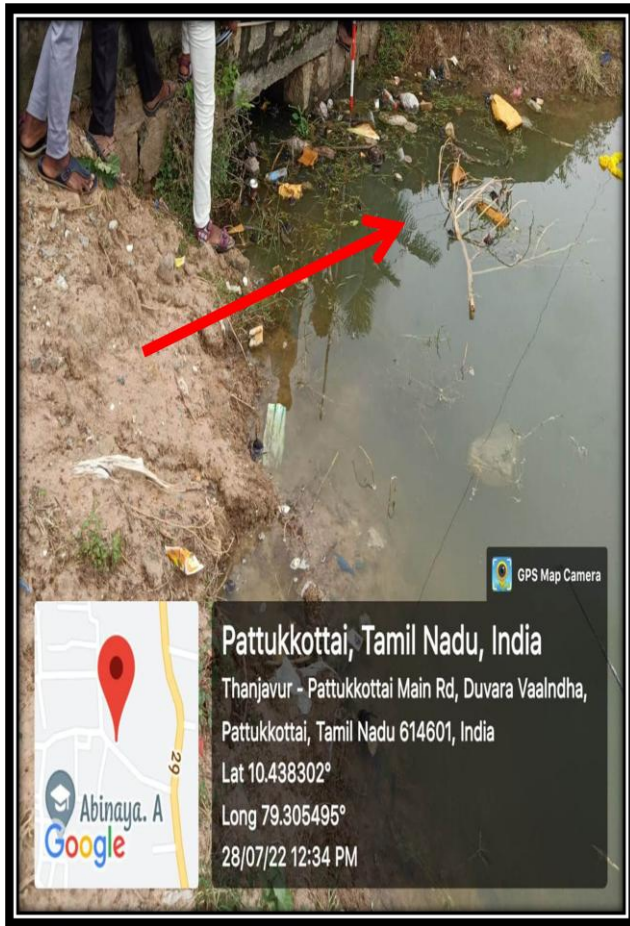
## WATER SAMPLING & TESTING



- ✓ **Water samples were collected. Since the depth was more, samples were collected from the boundary areas only, for safety purposes.**
- ✓ **Collected water samples were tested in our laboratory. Various water quality parameters like pH, BOD, COD, Turbidity and Alkalinity were analyzed.**

S.NO	TEST CONDUCTED	RESULT	REMARKS
1	pH	8.5	Water is alkaline in Nature.
2	BOD	250 ppm	High BOD value, because of solid waste disposal into the water body.
3	COD	350 mg/l	High COD value, due to the presence of oxidizable organic matter in the water body.
4	Turbidity	9.5 NTU	It indicates the water quality as BAD.
5	Alkalinity	135 mg/l	Presence of sewage in the water body makes the water more alkaline.

## HEALTH OF THE WATERBODY



- ✓ The water body is not clean. It has lot of garbage, plastic wastes and algae spread over it and is not good for drinking.
- ✓ Presence of solid wastes and organic matters in the water body has increased the BOD, COD level.
- ✓ Alkalinity level also seems to be high due to sewage mixing in the water body.
- ✓ Another water quality parameter tested was Turbidity and found to be 9.5 NTU. It indicates the water quality as BAD.
- ✓ From the results of the water sample testing, it may be concluded that, the water from Sembirankulam is not good for drinking. The water body may be utilized for irrigation but proper measures are to be taken for clearing the garbage, plastic wastes and algae spread over the water body.

## STATUS OF CHANNEL INFLOW



- ✓ The inlet of the water body was analyzed by our interns.
- ✓ The water body has 2 inlets and both the inlets are surrounded by garbage and plastic wastes.
- ✓ The inlet should have a proper screening to avoid entry of solid particles into the water body.
- ✓ Also because of the garbage, organic wastes & plastic wastes the water quality parameter has also drastically changed.
- ✓ Out of the 2 inlets, screening was available in 1 inlet. But it is damaged and hence garbage, organic wastes & plastic wastes enters the water body.
- ✓ In addition during rainy days water flow might get reduced, due to the presence of garbage, organic wastes & plastic wastes at the inlet, that affecting the level of the water body.

## SCOPE FOR REJUVENATION



**SEMBIRANKULAM** water body can be rejuvenated as a vibrant public place by providing:

- ✓ **Landscape near the water body.** It gives good ambience to the water body thereby attracting the people to visit the place.
- ✓ **Play area for children.** It attracts the kids.
- ✓ **Path-way for walking and exercise.** Youngsters and enthusiastic people will utilize the place for physical training.
- ✓ **Lightings using solar panels.** It gives eco-friendly provision for electricity and safety during night time.
- ✓ **Bio-toilets for public use.** It will keep the place tidy and also acts as a provision for nature calls.

## OTHER HIGHLIGHTS OF THE WATER BODY



**Our interns conducted a survey among the local people and gathered information about the water body.**

- ✓ **The water body is mainly used for fishing and irrigation purposes.**
- ✓ **The boundary of the water body has been drastically reduced.**
- ✓ **The quality of the water body has been dropped because of improper maintenance.**
- ✓ **Proper awareness should be created among the people to avoid littering.**

**Things to be prevented:**

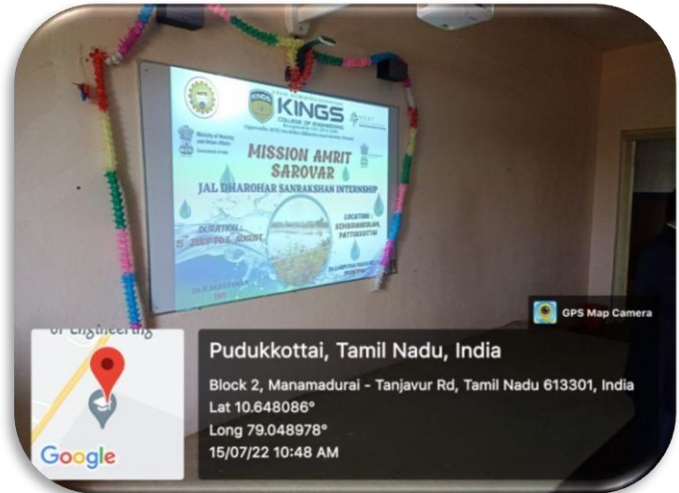
- ✓ **Local people use the water body for washing and bathing, which should be prohibited. Since it will affect the aquatic life of the water body.**
- ✓ **Since the water body is located in a rural area, some people are using it as a toiletry place. It should be strictly prevented.**
- ✓ **Local people should avoid littering near/into the water body.**

## CONCLUSION



- ✓ **Conserving water is important because it keeps water pure and clean while protecting the environment.**
- ✓ **Rainwater harvesting should be implemented for aquifer recharge and integrated water cycle management to be adopted.**
- ✓ **Screening should be done at the water body inlet to avoid entry of garbage, organic wastes & plastic wastes into the water body.**
- ✓ **Pathway is provided at one side of the water body. It should be extended on all sides.**
- ✓ **Washing & bathing should be prohibited at the water body and water should be used only for fishing & irrigation.**
- ✓ **Landscaping, kids play area, pathway for walking & exercise, solar lightings, bio-toilets can be provided at the water body for vibrant public use.**
- ✓ **Every drop counts. Hence saving water is necessary. It can be possible only with the help of the public, who are the consumers.**
- ✓ **Let's join our hands to save water together!**

## SOME GLIMPSES OF THE INTERNSHIP



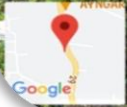
*Pre-planning for internship and guidelines to students by INO*



*Surveying at SEMBIRANKULAM water body using Total station*



*Surveying at SEMBIRANKULAM water body using GPS*



Pattukkottai, Tamil Nadu, India  
 C8Q5+F4, Duvara Vaalndha, Pattukkottai, Tamil Nadu 614601, India  
 Lat 10.439377°  
 Long 79.306894°  
 19/07/22 01:20 PM



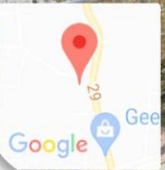
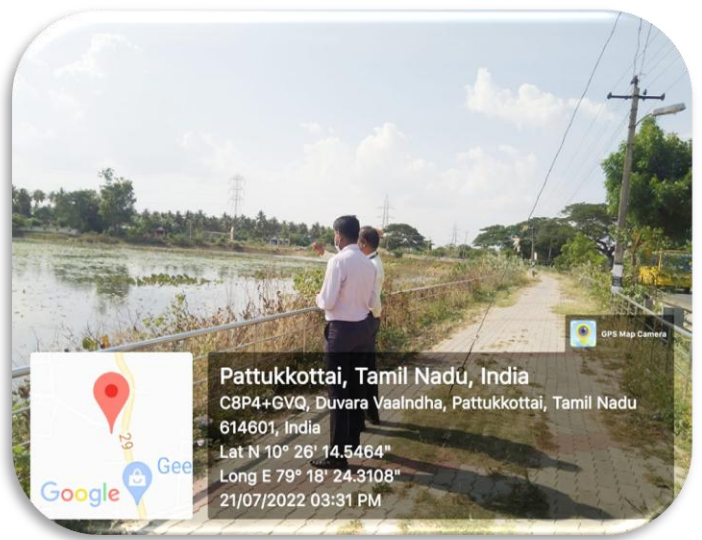
*Inlet at the water body, Sembirankulam*

**MISSION AMRIT SAROVAR**  
**JAL DHAROHAR SANRAKSHAN INTERNSHIP**  
**LOCATION : SEMBIRANKULAM, PATTUKKOTTAI**  
**DURATION : 15<sup>TH</sup> JULY TO 5<sup>TH</sup> AUGUST**  
**Dr. R.SARAVANAN INO**  
**Dr. J.ARPUTHA VIJAYA SELVI PRINCIPAL**

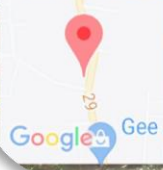


Pattukkottai, Tamil Nadu, India  
 C8Q5+F4, Duvara Vaalndha, Pattukkottai, Tamil Nadu 614601, India

*Display of poster at the water body Sembirankulam*



Pattukkottai, Tamil Nadu, India  
 C8P4+GVQ, Duvara Vaalndha, Pattukkottai, Tamil Nadu 614601, India  
 Lat N 10° 26' 14.5464"  
 Long E 79° 18' 24.3108"  
 21/07/2022 03:31 PM



Pattukkottai, Tamil Nadu, India  
 C8Q5+F4, Duvara Vaalndha, Pattukkottai, Tamil Nadu 614601, India  
 Lat N 10° 26' 16.2168"  
 Long E 79° 18' 25.2504"  
 21/07/2022 03:33 PM

*Monitoring of Internship progress by INO*





*Spatial temporal analysis at lab*



*Comparison of the calculated area of the water body with the map values.*



*Inspection of the water body inlet*



*Collection of water samples at the waterbody, Sembirankulam*



*Water sample testing at lab*



*Survey among the local people near the water body*



**STUDENT INTERNS WITH  
PRINCIPAL Dr.J.ARPUTHA VIJAYA SELVI & INO Dr.R.SARAVANAN**



**LET'S JOIN OUR HANDS TO SAVE WATER TOGETHER !!!**



தமிழ்நாடு அறிவியல் தொழில்நுட்ப மாநில மன்றம்  
TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Established by Government of Tamilnadu)  
Directorate of Technical Education Campus, Chennai – 600 025.  
Ph : 044-22301428, [www.tanscst.nic.in](http://www.tanscst.nic.in)

Dr.R.SRINIVASAN, M.Sc., Ph.D.,F.I.C.S., M.A.C.S.(USA),  
Member Secretary

Lr.No.TNSCST/SPS/BS/2022-2023

03.03.2023

To  
The Principal  
Kings College of Engineering,  
Pudukottai - 613 303



To  
MOD/ECE  
J.1001  
13/3/2023

Sir/Madam,

Sub: TNSCST – Student Project Scheme – 2022-2023 – approval intimation–grant release- reg.

With respect to the above scheme, the list of projects approved by the State Council is enclosed along with terms and conditions. You are requested to adhere to terms and conditions such as submission of UC and Seminar Paper on Time.

1.	Mr.Balakrishnan.R, Assistant professor, Department of ECE, Kings College of Engineering, Pudukottai - 613 303	AI based bo-der security system using IoT	S.Gayathri, S.Ramana Bharathi, K.Renuka, SM.Swethaa	EEE-879	The Principal	Rs 7500/-
Total						Rs 7500/-

Herewith enclosed the cheque for the approved grant and disburse the grant to the concerned students through the guides at the earliest

Kindly send the utilisation certificate (format enclosed) and seminar paper (Ref.T&C) on completion of the project.

Thanking you,

Yours faithfully,

313123  
Member Secretary.

- Encl: a) Terms & Conditions (T&C)  
b) Format of Utilisation Certificate (UC)  
c) Cheque for Rs.7500/- Cheque No:574867 dt.03.03.2023

Copy to: Individual Guides



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY  
DOTE Campus, Chennai- 25

STUDENT PROJECTS SCHEME 2022-2023  
LIST OF APPROVED PROJECTS

S.No	Guide Name & Institution	Title of the Project	Students Name	Project Code	Amount Rs.
<b>Electrical, Electronics and Engineering (EEE)</b>					
824.	Mr.Balakrishnan.R Assistant Professor Dept. of ECE Kings College of Engineering Pudukottai - 613 303	AI based border security system using IoT	S.Gayathri Sm.Swethaa S.Ramana Bharathi K.Renuka	EEE-0879	7500/-

Congratulations.  
J. N. N. N.  
07/3/2023.



**TAMILNADU STATE COUNCIL FOR  
SCIENCE AND TECHNOLOGY**  
GOVERNMENT OF TAMILNADU



**CERTIFICATE**

This is to certify that **Mr./Ms. S. Gayathri**, Kings College of Engineering, Pudukottai - 613 303 has successfully completed the project titled "AI based border security system using IoT" in the Sector **ELECTRICAL AND ELECTRONICS ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year 2022-2023.

Chennai-600 025  
27.10.2023  
EEE-0879/2023

  
**DR. R. SRINIVASAN**  
Member Secretary



**TAMILNADU STATE COUNCIL FOR  
SCIENCE AND TECHNOLOGY**  
GOVERNMENT OF TAMILNADU



**CERTIFICATE**

This is to certify that **Mr./Ms. S. Ramana Bharathi**, Kings College of Engineering, Pudukottai - 613 303 has successfully completed the project titled "AI based border security system using IoT" in the Sector **ELECTRICAL AND ELECTRONICS ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year 2022-2023.

Chennai-600 025  
27.10.2023  
EEE-0879/2023

  
**DR. R. SRINIVASAN**  
Member Secretary



**TAMILNADU STATE COUNCIL FOR  
SCIENCE AND TECHNOLOGY**  
GOVERNMENT OF TAMILNADU



**CERTIFICATE**

This is to certify that **Mr./Ms. K. Renuka**, Kings College of Engineering, Pudukottai - 613 303 has successfully completed the project titled "AI based border security system using IoT" in the Sector **ELECTRICAL AND ELECTRONICS ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year 2022-2023.

Chennai-600 025  
27.10.2023  
EEE-0879/2023

  
**DR. R. SRINIVASAN**  
Member Secretary



**TAMILNADU STATE COUNCIL FOR  
SCIENCE AND TECHNOLOGY**  
GOVERNMENT OF TAMILNADU



**CERTIFICATE**

This is to certify that **Mr./Ms. S.M. Swethaa**, Kings College of Engineering, Pudukottai - 613 303 has successfully completed the project titled "AI based border security system using IoT" in the Sector **ELECTRICAL AND ELECTRONICS ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year 2022-2023.

Chennai-600 025  
27.10.2023  
EEE-0879/2023

  
**DR. R. SRINIVASAN**  
Member Secretary