



## UK India Twin Cities Marine Litter Partnership Aberystwyth and Puducherry

26 August 2021

### Summary Report

#### EXECUTIVE SUMMARY

On 26 August, UK Science and Innovation Network organised an introductory meeting for the Twin Cities Marine Partnership with the Puducherry Administration, Pondicherry University, Aberystwyth Town Council, Aberystwyth University and Refill Wales in attendance. This meeting was organised to twin both the towns with the aim to address and mitigate the flow of plastics from land to the sea. The group shared the present status of plastic pollution within their respective towns along with initiatives they have undertaken and outlined challenges faced. They also discussed potential areas of future collaboration, to support the UK-India 2030 Roadmap goals, and also contribute to the individual country's priorities and vision for a single plastic free society. A detailed agenda of the event can be found at [Annex A](#).

The launch meeting increased understanding of the different geographical parameters that govern the diverse landscape in Puducherry and Wales, as well as the interdependencies between economic, environmental and social elements.

Participants discussed their respective visions of success for the twinning partnership. This included:

- **Management of waste and running water:** Twin cities identify, share insights on and pilot/co-develop solutions and innovations;
- **Standardisation and regulation** of waste management practices;
- **Research and education:** Universities in twin cities undertake joint research on a topic of mutual interest (eg. microplastics) and provide two-way access to relevant courses;
- **Tech and Community Engagement:** Refill identifies a partnership opportunity with a Puducherry counterpart, building on the models piloted in Aberystwyth. Citizen science/behaviour change pilot in one or both cities.

This discussion was well timed as environmental and climate security is at the heart of both countries' Prime Ministers. PM Modi's vision for India is a "vibrant voice of environmental security", encompassing "biodiversity, climate change, waste recycling, and the clean energy transition", as described in his recent speech celebrating the 75th Indian Independence Day. UK PM Jonson has unveiled plan for Wales focussing on building back greener with Wales. The Welsh Government also has a longstanding commitment to reducing waste and unnecessary plastic as outlined in their circular economy strategy, Beyond Recycling, which aims for a zero waste Wales by 2050.

Further in-depth meetings will be planned to take these work-streams forward.

## SUMMARY OF DISCUSSIONS

**Team Aberystwyth** shared the present practice of dealing with waste including plastic and other material. The major challenge was mis-presented domestic waste, on the go litter, beach litter as Aberystwyth is a university /tourist town. Proximity to treatment solutions and strong implementation remain a work in progress.

A number of initiatives were underway: Ongoing review of litter bin provision and servicing, waste collection operations - a number of pilots implemented like Caru Ceredigion. Communication was at the heart of the initiatives including reaching to the community through press releases, social media, website and material. Community engagement included activities such as supporting local litter picking activity, facilitating on the go recycling, engagement with key stakeholders such as the Town Council, Aberystwyth University, landlords, as well as working with proactive local groups like Surfers Against Sewage, Caru Aber Refill Aberystwyth. Some of the achievements have been **Aberystwyth University** becoming the first University in the World to be granted 'Plastic Free University Certificate'. Aberystwyth town has also been awarded Plastic Free Community status by Surfers Against Sewage and the Refill scheme helps keep plastic waste off their streets and out of the sea.

### Challenges

- Seasonal peaks of tourists and students
- Transient town centre population – lack of ownership
- Housing stock – The condition of the Welsh housing stock, prevalence of older homes, current low energy efficiency of many homes and unacceptably high levels of fuel poverty create particular challenges for Wales,
- Meeting increasingly challenging recycling performance targets
- Community's Aversion to change
- Budgetary and resource pressures
- Community expectation management
- Lack of consensus on what would further improve the situation waste management solutions
- Social and Health influencers

**Team Puducherry** highlighted the need to strengthen the source segregation to plug gaps right from door to door collection, to transportation to final dumping site. This will improve the recycling rates and mitigate chocking of primary and secondary drains which ultimately enters sea. They highlighted the potential merits of a knowledge exchange with Aberystwyth counterparts around recycling rates, integrated informal sectors in collection and recycling, building in value addition from plastic sorting and re use, strengthening of monitoring mechanism to control the usage of SUP from retail to manufacturing. Intensified door to door collection had negated the need for second bins. Work was underway to identify major waste generators and disengaging storm water from plastic litter.

**They mentioned number of Initiatives, including but not limited to:** Reclamation of land through bioremediation, banning single use plastic, local government websites for better accountability, field data collection, framing of by-laws for utilizing recycled products in government projects and to render subsidy for utilization in private projects and promoting products made out of Single use plastics.

## Challenges:

- Lack of safe biodegradable sanitary napkins/hygiene products;
- Due to lack of accountable door to door collection, littering happens in all levels of collection to transportation stages-source segregation;
- Non availability of land for Setting up of disposal facility;
- Chocking of primary and secondary drains which ultimately enters sea;
- Lack of integration and authorization of informal sectors (waste pickers) in collection and recycling;
- Poor capacity of garbage collectors, informal waste pickers in product sorting and value addition;
- Financial Assistance for setting up of recycling/Reprocessing units;
- Weak monitoring mechanism to control the usage of Single Use Plastics from retail to manufacturing;
- Avoiding secondary bins by intensified door to door collection;
- Identification of major waste generators

## Areas where Puducherry would be interested to twin with relevant agencies in Wales:

- Knowledge sharing on digitalized collection and transportation mechanisms;
- Sustainable packaging to reduce the generation of waste;
- Screening mechanisms at primary, secondary and tertiary drains in order to prevent the entry of plastic into the marine environment;
- Initiation of research on developing products from waste plastic;
- Integration of informal waste picker sector

## JOINT PRIORITY AREAS OF FOCUS

Puducherry and Aberystwyth representatives identified key priorities and related activities for the twinning partnership. Consensus was reached on the following topics, which could be explored in more depth in tailored “deep dive” sessions:

### 1. Data, innovation and tech

- Identifying and sharing in depth insights on innovation, data management techniques and technological solutions that tackle marine pollution challenges in both communities;
- Co-development/piloting of apps / software

### 2. Standardisation and regulation:

- In depth knowledge exchange on digitalisation and standardisation of waste (with a focus on post segmentation process)
- Identification of pilot study or activity in one or both cities, building on existing knowledge and expertise.

### 3. Research and Education:

- Twin Cities partnership to be showcased at Aberystwyth University Festival in October;
- Identifying priority topics for joint research and potential sources of funding;
- Identifying which marine pollution/ science and innovation related courses are relevant to both Universities, and modalities around unlocking access.

### 4. Community Engagement/ Social Science:

- In depth knowledge exchange on “what works” in relation to mobilising local groups and initiating “Citizen Science” initiatives.
- Identification of possible joint studies/ pilots in one or both cities.

A proposed action plan can be found at **ANNEX B**.

**ANNEX: A**

**UK India Twin Cities Marine Litter Partnership**  
26 August, 1430-1630 IST/1000-1200 UK time

**Agenda for Kick off meeting**

**Aberystwyth and Puducherry**

|                                 | Session         |  |  |
|---------------------------------|-----------------|--|--|
| <b>Introductions</b>            |                 |  |  |
| <b>5 min</b>                    | Opening Remarks | Oliver Ballhatchet<br>British Deputy High Commissioner, Chennai  |  |
| <b>5 min</b>                    | Remarks         | Mr S Dinesh Kannan, IFS<br>Director<br>Department for Science, Technology and Environment<br>Government of Puducherry, India   |  |
| <b>City to City Discussions</b> |                 |  |  |
| <b>10 min</b>                   | Aberystwyth     | Ceredigion Environmental Services <ul style="list-style-type: none"> <li>• What is the high level ambition for the city for Plastic Pollution?</li> <li>• Sharing the landscape-problem at hand</li> <li>• How was it dealt with, sharing the initiatives/innovations applied?</li> <li>• What is the current level of improvement?</li> <li>• How is Community engaged and what education and outreach activities take place in the city</li> </ul> | Gerwyn Jones/Beverley Hodgett, Environmental Services, Ceredigion County Council       |
| <b>5 min</b>                    |                 | Aberystwyth University- Showcase of initiatives to tackle Plastic Pollution  | Prof Colin McInnes<br>Pro Vice-Chancellor- Research, Knowledge Exchange and Innovation |
| <b>5 min</b>                    |                 | Showcase of citytosea campaign by Refill   | Hannah Osman<br>Refill Wales Manager   |

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| <b>10 min</b>  | Puducherry  | <ul style="list-style-type: none"> <li>• What is the high level ambition for the city for Plastic Pollution?</li> <li>• Sharing the landscape-problem at hand</li> <li>• How was it dealt with, sharing the initiatives/innovations applied?</li> <li>• What is the current level of improvement?</li> <li>• How is Community engaged and what education and outreach activities take place in the city</li> </ul>  | Mr Dinesh Kannan  |
| <b>5 min</b>   |   | Pondicherry University initiatives to tackle Plastic Pollution  | Mr S Sudalai, Assistant Professor, Centre for Pollution Control and Environmental Engineering, Pondicherry University |
| <b>Networking Session on Creating an Enabling Environment</b>                          |   |   |   |
| <b>Moderated by Sarah Fallon, Regional Director, UK Science and Innovation Network</b> |   |   |   |
| <b>30 min</b>  | Creating an Enabling Environment through collective working | <b>Some questions to consider for this session to identify next steps:</b> <ol style="list-style-type: none"> <li>1. For twining to be successful, what would good look like from your perspective?</li> <li>2. What tools, research, techniques and processes are you currently developing to tackle plastic pollution in your region?</li> <li>3. Which are the top 3 areas for each Twin to tackle plastic pollution and who is lead organisation for that?</li> <li>4. How do we work together?</li> <li>5. Other stakeholders to be invited?</li> <li>6. Agreement on next meeting date</li> </ol> |   |
| <b>2 min</b>   | Vote of Thanks  | <b>Sarah Fallon</b>   |   |

**ANNEX B**

**Stakeholder mapping for potential future collaboration**

| Indian Partner/Funding | Areas/themes of interest   | UK partner/Funding |
|------------------------|--|--------------------|
|                        | <p><b>1. Data, innovation and tech</b></p> <ul style="list-style-type: none"><li>- Identifying and sharing in depth insights on innovation, data management techniques and technological solutions that tackle marine pollution challenges in both communities;</li><li>- Co-development/piloting of apps / software</li></ul>   |                    |
|                        | <p><b>2. Standardisation and regulation:</b></p> <ul style="list-style-type: none"><li>- In depth knowledge exchange on digitalisation and standardisation of waste (with a focus on post segmentation process)</li><li>- Identification of pilot study or activity in one or both cities, building on existing knowledge and expertise.</li></ul>                             |                    |
|                        | <p><b>3. Research and Education:</b></p> <ul style="list-style-type: none"><li>- Twin Cities partnership to be showcased at Aberystwyth University Festival in October;</li><li>- Identifying priority topics for joint research and potential sources of funding;</li><li>- Identifying which marine pollution/ science and innovation related courses are relevant</li></ul> |                    |

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|  | to both Universities, and modalities around unlocking access.   |  |
|  | <p><b>4. Community Engagement/ Social Science:</b></p> <ul style="list-style-type: none"> <li>- In depth knowledge exchange on “what works” in relation to mobilising local groups and initiating “Citizen Science” initiatives.</li> <li>- Identification of possible joint studies/ pilots in one or both cities</li> </ul> |  |

#### Proposed activities and deliverables for 12 month

| Proposed Activity Theme   | 12/24 month picture of success  | Stakeholders (UK) | Stakeholders (India) | Funding Required (including brief breakdown of costs) |
|---|---|-------------------|----------------------|---|
| A webinar on the <b>Technological innovation in Segregation practices and alternatives to plastics</b>  | 1. <i>Co-development/piloting of apps / software with Refill</i>  |                   |                      |   |
|   | 2. <i>Piloting Graphene developed by tatas?</i>   |                   |                      |   |
|   | 3. <i>Showcase of tech innovations around cleaning water bodies/ drainages?</i>   |                   |                      |   |
| <p><b>Standardisation and regulation:</b></p> <p>In depth knowledge exchange on digitalisation and standardisation of waste (with a focus on post</p> | <p><i>Identification of pilot study or activity in one or both cities around:</i></p> <ol style="list-style-type: none"> <li>1. <i>Suitable scientific disposal mechanism</i></li> <li>2. <i>Session on Strengthening on ground Implementation</i></li> </ol> |                   |                      |   |

|                                 |   |       |  |  |
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| segmentation process)           | <ol style="list-style-type: none"> <li>3. <i>Pilot scientific data gathering on plastics and micro plastics, to understand source of plastics</i></li> <li>4. <i>Session on strengthening the EPR-showcase of how UK achieved it.</i></li> <li>5. <i>Capacity building sessions- Mining the plastic materials mixed up and dumped in the dump yard.</i></li> </ol>  |       |  |  |
| <b>Research &amp; Education</b> | <ol style="list-style-type: none"> <li>1. <i>Showcase of Twin cities at Aber university fest in October</i></li> <li>2. <i>Sharing of best practices around or joint activity on mitigating movement of plastics from source through Canals, Drainage, rivers, backwaters</i></li> <li>3. <i>Capacity building around monitoring of the Micro Plastic and other pollutants in the coastal water and the tidal water bodies with the Technical support</i></li> <li>4. <i>Promoting Environmental Education in the School curriculum.</i></li> </ol> | CEFAS |  |  |