Evaluation of Engagement Methods in a multi-national interdisciplinary research project

Hannah Gray and Asher Minns

**GLOBAL RESEARCH
TRANSLATION AWARD**

UEA

University of East Anglia

We support the Sustainable Development Goals

Evaluation of Engagement Methods in a multi-national interdisciplinary research project

Figure 1: Logos of each partner institution

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Contents

1. Introduction

1.1 The Global Research Translation Award (GRTA)

In October 2019, UEA received a £1.36 million Global Research Translation Award (GRTA) to help tackle health, nutrition, education and environment issues in developing countries. Originally an 18 month project, UEA received a no-cost extension to March 2022 as a result of delays caused by Covid-19 and associated restrictions.

The GRTA was part of the UK government's Global Challenges Research Fund (GCRF) Innovation and Commercialisation Programme, developed to fast-track promising research findings into real-world solutions. These include practical tools and commercial opportunities for products and services that can be used by local communities to help make their lives and environments healthier, safer and more sustainable.

In total, UK Research and Innovation (UKRI) awarded £14.8 million through Global Research Translation Awards to 18 international partnerships between UK Higher Education Institutions and organisations from across low and middle income countries (LMICs).

1.2 The UEA'S GRTA Project

UEA's GRTA project was *Meeting the SDGs: creating innovative infrastructures and policy solutions to support sustainable development in Global South communities*.

The project included 15 organisations from 10 countries working across four sub-projects (**Error! Reference source not found.**): Child Malnutrition, Family Literacy, Microplastics and Sustainable Food Systems.

The structure chart **Error! Reference source not found.**shows which countries and institutions were represented (**Error! Reference source not found.**). The project received expert input to help maximise impact from the filmmaker Christine Cornea, the creative writer Jean McNeil and the science communicator Asher Minns.

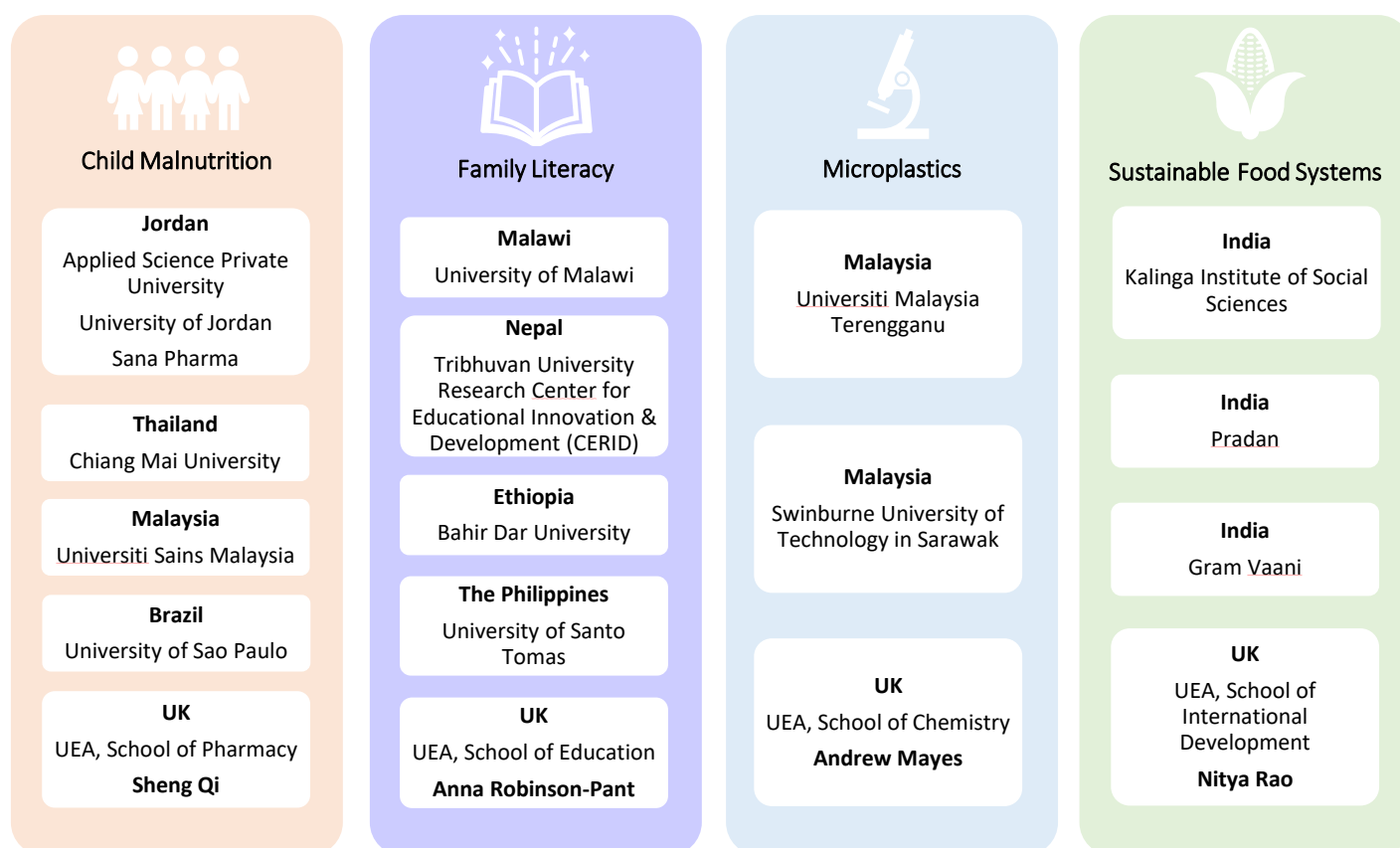| Child Malnutrition	Family Literacy	Microplastics	Sustainable Food Systems
Jordan	**Malawi**	**Malaysia**	**India**
Applied Science Private University	University of Malawi	Universiti Malaysia Terengganu	Kalinga Institute of Social Sciences
University of Jordan	**Nepal**		**India**
Sana Pharma	Tribhuvan University Research Center for Educational Innovation & Development (CERID)	**Malaysia**	Pradan
Thailand		Swinburne University of Technology in Sarawak	**India**
Chiang Mai University	**Ethiopia**		Gram Vaani
Malaysia	Bahir Dar University		**UK**
Universiti Sains Malaysia	**The Philippines**	**UK**	UEA, School of International Development
Brazil	University of Santo Tomas	UEA, School of Chemistry	**Nitya Rao**
University of Sao Paulo		**Andrew Mayes**	
UK	**UK**		
UEA, School of Pharmacy	UEA, School of Education		
Sheng Qi	**Anna Robinson-Pant**		

Figure 2: Institutions and their respective UEA lead researchers in each sub-project.

2. The GRTA engagement strategy

There were two components of the GRTA project's engagement work, within the project, and outside the project.

- Internal aspects of engagement, outlined in Section 2.1**Error! Reference source not found.**
- External aspects of engagement, outlined in Section 2.2.

2.1 Internal engagement methods

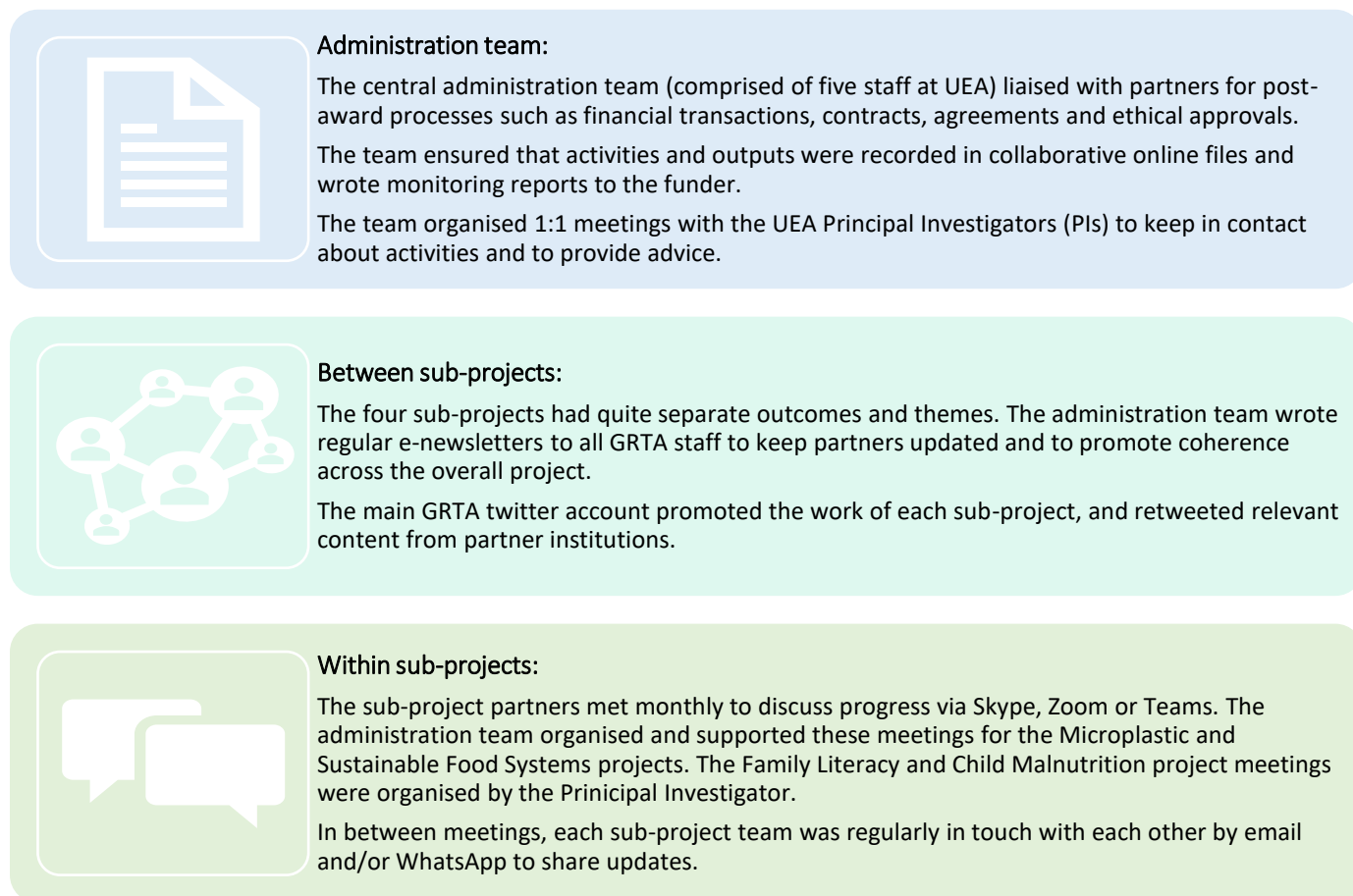There were categories of engagement within the GRTA project (**Error! Reference source not found.**.

Administration team:

The central administration team (comprised of five staff at UEA) liaised with partners for post-award processes such as financial transactions, contracts, agreements and ethical approvals.

The team ensured that activities and outputs were recorded in collaborative online files and wrote monitoring reports to the funder.

The team organised 1:1 meetings with the UEA Principal Investigators (PIs) to keep in contact about activities and to provide advice.

Between sub-projects:

The four sub-projects had quite separate outcomes and themes. The administration team wrote regular e-newsletters to all GRTA staff to keep partners updated and to promote coherence across the overall project.

The main GRTA twitter account promoted the work of each sub-project, and retweeted relevant content from partner institutions.

Within sub-projects:

The sub-project partners met monthly to discuss progress via Skype, Zoom or Teams. The administration team organised and supported these meetings for the Microplastic and Sustainable Food Systems projects. The Family Literacy and Child Malnutrition project meetings were organised by the Prinicipal Investigator.

In between meetings, each sub-project team was regularly in touch with each other by email and/or WhatsApp to share updates.

Figure 3: Methods of internal engagement within the GRTA project

2.2 External engagement process

Communication with external stakeholders interested in the work of the project overall, for example the funder and the wider international development research community, was largely coordinated by the UEA administration team.

Each of the four sub-projects adopted different external engagement strategies to suit their locations and thematic focus. However, all sub-project partners received the same training on impact and engagement and followed a common process as advised by Asher Minns (**Error! Reference source not found.**).

1. Mapping	2. Categorising	3. Planning	4. Recording	5. Evaluating
Fill in the stakeholder mapping grid	Fill in columns A-G on the stakeholder matrix	Develop a communication plan using template	Record activities in the online spreadsheet	Fill in columns H-L on the stakeholder matrix

Figure 4: GRTA impact and engagement process

2.2.1 Mapping

The external engagement process starts with mapping stakeholders on a grid, to understand the interest and influence of each stakeholder, to prioritise the engagement effort (**Error! Reference source not found.**).
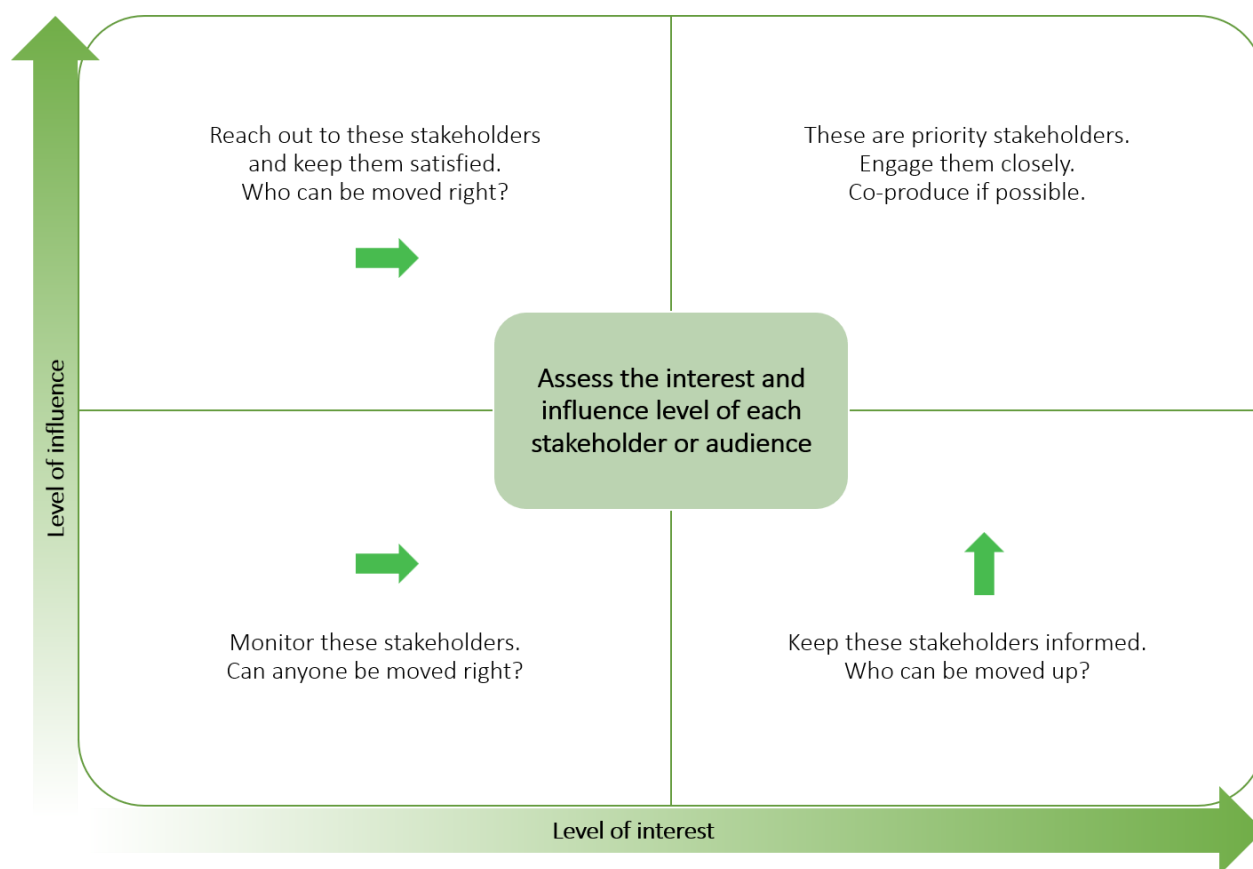

Figure 5: A Stakeholder mapping theory diagram

2.2.2 Categorising

After the mapping exercise, the teams of each sub-project completed Part A of a stakeholder matrix spreadsheet (columns A-G), to clarify further information about each stakeholder and to think through how to engage the stakeholders who have been identified for involvement in their respective projects (Figure 6). **Error! Reference source not found.**The list of options for the final column 'Desired contribution to project' are:

1. Objective setting
2. Project design
3. Access to data/ locations/ communities
4. Provide interview subjects
5. Data collection or analysis
6. Feedback on findings
7. Disseminate findings
8. No contribution
9. Other contribution (please state).

Stakeholder information			From stakeholder mapping exercise:		Desired contribution to project (type all relevant numbers, separated by commas)*
Name of stakeholder contact*	Name of organisation	Type of Stakeholder (pick from drop down list)	Their interest in the project (pick from drop down list)	Their influence on the project's success (pick from drop down list)	

Figure 6: Part A of the stakeholder matrix.

2.2.3 Planning

Following the stakeholder analysis steps, the sub-project teams developed communication plans. These were short documents that guided the partners through planning an engagement strategy using SMART principles (Specific, Measurable, Attainable, Realistic and Timely). A summary of the engagement planning process is shown in Figure 7 and the communication plans for each sub-project are included in Appendix 1.

Message	Audience	Channel	Outcome	Evaluation
What is the new message or product from your research?	Who is the stakeholder that you will communicate this message to?	What medium will you use to get your message across?	What is your intended outcome? Be realistic!	How will you measure if you have achieved your outcome?

Figure 7: A flow diagram showing the process of planning engagement.

2.2.4 Recording

The UEA administration team created spreadsheets to record project engagement activities on OneDrive for each sub-project, and the partners filled these in directly or sent information by email for the administration team to fill in. These databases are designed with the UKRI Researchfish database in mind, to enable ease of reporting to the funder, as well as enabling the project teams to record and evaluate their own work.

2.2.5 Evaluating

The evaluation part of the process returns to the stakeholder matrix spreadsheet, encouraging partners to fill in Part B (Figure 8)**Error! Reference source not found.**. This evaluation should be done at interim points throughout the project, as well as at the end. The partners choose from the following list to evaluate the impact of their stakeholder engagement in the project:

1. High;
2. Moderate;
3. None;
4. Negative;
5. Don't know.

Estimated time input and type of activity (e.g. 1 hour interview)	Impact of stakeholder on improving:		Impact of research on improving stakeholder's:	
	Research (pick from drop down list)	Practice (pick from drop down list)	Policies (pick from drop down list)	Practice (pick from drop down list)

Figure 8: Part B of the stakeholder matrix template for evaluation of stakeholder engagement

3. Evaluation of the GRTA engagement strategy

3.1 Evaluation of internal engagement methods

The GRTA administration team spent considerable time setting up systems to enable good communication within and between the sub-project teams at the start of the project. This section evaluates their effectiveness and makes recommendations for improvements in subsequent projects.

3.1.1 A shared GRTA mailbox

An email address was set up for the GRTA project and each of the administration team were given access to the mailbox. Each sub-project Principal Investigator (PI) was encouraged to copy any GRTA email communications to this email address. The mailbox was monitored each day by the GRTA administrator, who would then categorise emails for attention of the relevant team member. This ensured that any queries were followed up swiftly and appropriately. The team also copied any GRTA-related individual emails to this mailbox, providing a common shared space where the team could go to find out about any queries if another team member was out of the office. This approach worked well for within-UEA communications.

3.1.2 GRTA OneDrive

The administration team also set up a OneDrive shared file storage for the project, with a folder for each sub-project and folders for general and archive information. Access was given to all staff members working across all the institutions to their relevant sub-project folder. For each sub-project, the administration team set up a suite of communication plan documents and a record of activities spreadsheet, as well as folders for storing photos and outputs like blogs. The administration team encouraged PIs, Research Associates and partners to record their project activities in the spreadsheet and fill in the communication plan documents following Asher Minns' training sessions.

There were challenges with the OneDrive system, the most significant being that some overseas partners could not gain access to the files. This led to some project partners creating their own file stores on Google drive or resorting to emailing attachments around, causing document version control issues. Most of the overseas project partners did not use the OneDrive system and sent updates to the GRTA admin team by email instead.

In conclusion, the OneDrive system worked well as a single place to store current versions of documents for the administration team, but it was not successful as a collaborative space for partner institutions. At the start of the Covid-19 lockdown (March 2020) UEA fast-tracked the roll out of MS Teams to all staff. In future, multi-partner projects may have more success with Teams as a collaborative file store solution than OneDrive on its own.

3.1.3 Meetings with PIs and project teams

At the beginning of the project the administration team met with each PI to determine how to deliver the best support. This differed for each PI depending on the nature of their project and their preferred working style. Some of the sub-project partners had been working together for some years, others were new partnerships. Two of the PIs preferred to manage partner relationships themselves (Child Malnutrition and Family Literacy) and the administration team checked in with the PIs on a quarterly basis.

The administration team organised monthly meetings via Skype for two of the sub-projects (Sustainable Food Systems and Microplastics). These were an important tool to keep communication channels open and to keep momentum going on project activities. The administration team took minutes and actively followed up with partners on the progress of action points. Skype was the main method used, although Teams was tried as well, but some partners could not gain access. On calls with partners abroad it helped to turn video off to improve quality of audio. Some of the meetings with the Sustainable Food Systems project had up to 20 people on the call, which required good chairing by the PI and GRTA Project Officer, and careful minute taking by two members of the administration team to ensure accuracy.

It is worth noting that the GRTA administration team had problems with these Skype meetings when working on campus. Firstly, finding a seminar room with appropriate equipment for video conferencing at the appropriate time for the overseas partners was a challenge on the busy UEA room booking system. Once the team had secured a room, sometimes the video conferencing facilities in the room did not work properly. This led to a high level of stress for the administration team and reduced the success of these meetings. Since working from home during the coronavirus lockdown, these online meetings were more reliable and successful. One of the sub-projects (Family

Literacy) purchased a Zoom subscription for their partner meetings, because the Ethiopian and Malawian partners had poor internet connections and were unable to use Teams or Skype effectively.

3.1.4 E-newsletters
The administration team collated all project partner email addresses into a mailing list, as well as key UEA research leaders and UKRI contacts. Approximately once a month the GRTA Project Officer (Communications) composed and circulated an e-newsletter to this list. The news would include updates about sub-project activities and key administration information for example guidance for claiming reimbursement. Each sub-project would have a couple of sentences about recent activities and a photo. This newsletter served as a useful reminder to project partners and UEA research leaders about the progress of the GRTA project and fostered coherence on a project with four quite separate research strands. The feedback has been positive.

3.1.5 Training
At the beginning of the GRTA project Asher Minns, the Impact and Communication advisor for the project, ran a training session on science communication and stakeholder engagement for the UEA PIs. This training session was repeated again for each sub-project team via Skype. It introduced the teams to the stakeholder engagement process, encouraging a consistent approach for each sub-project, considering impact and engagement from the outset. These training sessions were well received by the partners, grounding the approach in evidence and inspiring creative ideas for stakeholder engagement.

3.1.6 Other internal engagement methods
The administration team set up a GRTA Twitter account, @grta_project, primarily to share news and outputs from the sub-projects with external stakeholders, but also as a platform to share updates between the sub-projects by connecting with social media accounts of sub-project networks and individuals. In addition, by following the twitter accounts of partner organisations and their key stakeholders, the administration team were able to keep abreast of field and laboratory work in the partner countries, giving another route for evidencing project activities and impact.

The Sustainable Food Systems and Microplastics sub-projects set up WhatsApp groups to share updates of their activities in different locations. The GRTA Administrator joined these groups to keep track of project activities for reporting purposes, and for sharing interesting photo and video content through the GRTA twitter account. In addition, when significant activities or themes emerged from the WhatsApp feed, the administration team could use this content as a basis for crafting blogs. The sub-projects also used WhatsApp groups for specific events to coordinate activities and share outputs. For example, when the PI for the Microplastics sub-project visited Malaysia to train the network partners how to use the analysis kits, a WhatsApp group was used to keep the administration team informed of activities for reporting purposes and to promote the activities with photos on the GRTA Twitter account.

3.1.7 Project reports
On this large multi-national and multi-institutional award with four distinct sub-projects, the GRTA administration team were responsible for collating records of project engagement activities and reporting to the funder at 6 monthly intervals. In many research grants this responsibility sits with the PI, but given the wide scope and multi-project remit of this award the administration team took on this role on behalf of the PIs. The administration team aimed to make the reporting process as easy as possible for the project teams. By collating information as the sub-projects progressed into a record of activities' spreadsheet for each sub-project, the administration team were able to keep track of activities against the work packages and draft reports at the required intervals. These drafts were edited and approved by the PIs and the project partners before being submitted to the funder. The administration team were also responsible for completing the ResearchFish submissions for the GRTA award on behalf of the overall award PI, Fiona Lettice.

The process worked well in general. It relied on having a dedicated Project Administrator to record activities as they happen and outputs as they are generated, and a dedicated Project Officer to collate all the information recorded into reports which interpreted actual project activity and impact against planned theory of change models and workplans.

3.2 Evaluation of external engagement process

The GRTA impact team developed training and templates at the start of the project to facilitate sub-project teams to plan and implement engagement activities with their stakeholders. This section evaluates their effectiveness and makes recommendations for improvements in subsequent projects.

3.2.1 Stakeholder mapping

The process for stakeholder mapping (see 2.2.1 Mapping) varied in each sub-project.

The Sustainable Food Systems sub-project is working in one country (India), therefore the partners collaboratively worked on their stakeholder map at the project's launch workshop (

Figure 9).

The Family Literacy sub-project also ran a launch workshop where they carried out the stakeholder mapping exercise, but in this case each partner organisation created a separate map because they

are working in four different countries.
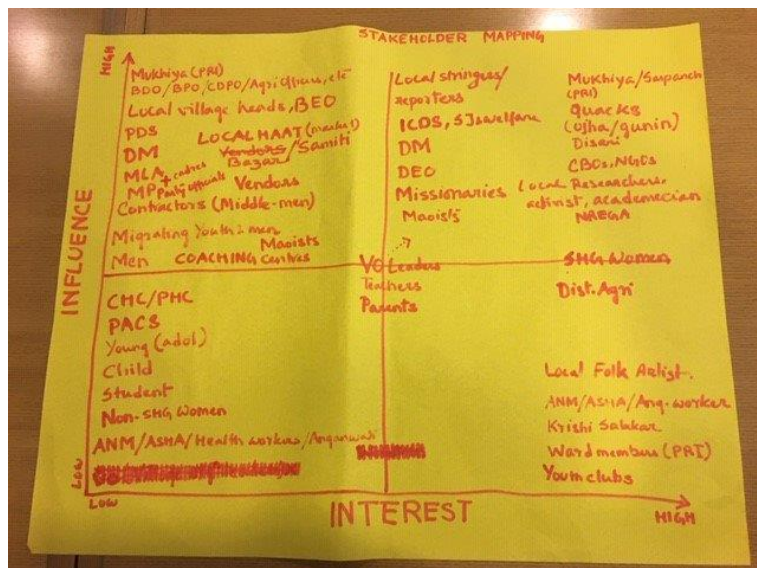
The Microplastic and Child Malnutrition sub-projects did not have partner workshops arranged at the start of the project, so the partners carried out their own stakeholder mapping independently for their national or regional contexts, following the online training.

Each of the partner organisations participated in the training and produced a stakeholder map. There was a good level of engagement, as people discussed which stakeholders had differing levels of interest and influence.

Figure 9: The stakeholder mapping exercise by the Sustainable Food Systems sub-project

3.2.2 Stakeholder matrix

Following the stakeholder mapping, each partner was encouraged to think further about the stakeholders identified in the mapping stage, using the spreadsheet designed by Hannah and Asher (see 2.2.2 Categorising). This spreadsheet enables the partners to think about whether they have a specific contact within an important stakeholder group, and how they would like to engage with that stakeholder group.

This part of the process received less engagement from the partners than the stakeholder mapping. Some partner organisations did complete the spreadsheet independently. Other partners needed encouragement from the PI and the Project Officer. The Project Officer partially filled in some of the spreadsheets on behalf of the partners, gleaning information from online meetings and emails, but not all the sections were filled in because information from partners was lacking in some cases.

3.2.3 Communication plans

Once the sub-projects had identified key stakeholders to engage with, the next stage is to create a communication plan to detail the strategy for successfully engaging with these stakeholders (see Figure 6: Part A of the stakeholder matrix.

2.2.3 Planning). The Project Officer assisted each of the four sub-projects to create a focussed communication plan (Appendix 1: Communication Plans

A1.1   Child Malnutrition Communication Plan

The Child Malnutrition project put together a communication strategy (Table 1) as the central part of their communication plan.

Message/Product *What is the new message or product from your research?*	Audience *Who is the stakeholder that you will communicate this message to?*	Channel *What medium will you use to get your message across?*	Outcome *What is your intended Be realistic!*
New technology: UEA core technology developed by regional partners to suit their regional-specific sub-type of micronutrient deficiencies	Local manufacturing contractors;	Technology, training and support	Prototype formulation: regional specific supple product ready for pilot based on specific regio
	Regional partners and regulatory bodies	Meetings with key personnel at these organisations; Market research with market analysers and agents;	Clear & refined comme plan; Approval processes for marketing
New product: cheap, palatable product covering child nutritional deficiencies	Health-related government departments	Meetings with key personnel at these organisations	Engage and establish d with policy makers to p partial government sub
	Consumer groups (schools, nurseries and households)	Educational leaflets written in collaboration with the creative writer Jean McNeil	to build awareness of micronutrient deficien increase the likelihood adoption
	General public	Press releases in local influential newspapers; Short movie in English & regional languages	Increased awareness o malnutrition, wellbeing engagement with wide

Table 1: Child Malnutrition Communication Strategy

A1.2 Family Literacy Communication Plan

The Family Literacy project put together a communication strategy (Table 2) as the central part of their communication plan.

Message/Product	Audience	Channel	Outcome
What is the new message or product from your research?	*Who is the stakeholder that you will communicate this message to?*	*What medium will you use to get your message across?*	*What is your intended Be realistic!*
New model: A new concept of family literacy based on indigenous intergenerational learning	Key international stakeholders	International seminars and conferences: • Launch event in Manila • Seminar in UIL* Hamburg • Final seminar at UNESCO Paris	Greater dialogue and c cultural fertilisation of literacy ideas Sectors outside educat WHO) recognise need f literacy approach
	Government and NGO stakeholders in each partner country	Stakeholder workshops within each country; Policy focused research reports including policy guidance	Integration into nation and strategies
	Government and NGO stakeholders in each partner country	Development of: • literacy materials • films • training guides	Approach being used in Government/ NGO f training and literacy pr
	Key international stakeholders	Case studies of good practice on UIL* database; policy briefing paper	Enhanced understandi engagement with deba family literacy by key international stakeholo
	Academic research networks	Special Issue journal; Website and blog	Stronger conceptualisa family literacy within d lifelong learning and ec
	Parents and youth in Philippines	Mobile app 'one-stop centre' to share experiences, access resources	Collaboration and supp

Table 2: Family Literacy Communication Strategy

A1.3   Microplastic Communication Plan

The Microplastic project put together a communication strategy (Table 3) as the central part of their communication plan. Updated at workshop 23/02/2021, new actions highlighted in yellow.

Message/Product *What is the new message or product from your research?*	Audience *Who is the stakeholder that you will communicate this message to?*	Channel *What medium will you use to get your message across?*	Outcome *What is your intended Be realistic!*
New product: Analysis kits to measure microplastic pollution	Staff at organisations identified to use the kits (UMT, INOS, DHI, Reef Guardian)	1. A multi-lingual video instruction manual (developed by Christine Cornea) 2. A co-ordination centre for the programme in UMT	A network of people co accurate data using the reporting it to a centra
New data: Distribution maps showing levels of microplastic pollution collected from the kits	Policy-makers in government and NGOs (WWF, WCS, MNS)	1. Film and education resources 2. GEO Blue Planet marine litter initiative 3. NOAA NCEI Global Marine MP database 4. Stakeholder meetings	Inform policy decisions actions to reduce micro levels
New findings: Analysis kits easily and cheaply show levels of microplastic pollution in Malaysia Impacts of Pandemic PPE	General public in Malaysia; Malaysian media; Green Film festival at UEA	1. A public information documentary film (developed by Christine Cornea) 2. Media articles and blogs e.g. Borneo Post 3. INOS Gallery exhibition at UMT	An increased level of understanding about n pollution
New model: Test model of approach to enable roll out to other countries in region.	Agencies in other countries in region; International agencies like CEFAS and NGOs.	1. End of project workshop to review project and celebrate successes (could include an outward focussed day for other countries looking to start a microplastic network) 2. Academic reports	Determine how the ne be continued and exte other countries

Table 3: Microplastic Communication Strategy

A1.4   Sustainable Food Systems Communication Plan).

The communication strategy table is the central part of the plan, detailing what the key messages or products are, who the audience is, and what mediums will be used to engage stakeholders. The table outlines what the ideal outcomes from this engagement would be, and lastly details how the team will measure if they have succeeded.

Again, the Project Officer developed a template for the communication plan and created a first draft of the communication plan for each sub-project, cross-referencing information from the stakeholder matrices with information from the original grant application, which included much detail about planned activities and intended outcomes. These were validated and amended by the project partners via online meetings or email.

This process was easier for some sub-projects than others. The Sustainable Food Systems sub-project found the process straightforward, because their activities were building on work already happening, and each of their activities were very specific and focused for a particular stakeholder group e.g. YouTube videos for younger generations, theatre sessions for women's groups, curriculum content for training colleges. In contrast, the Microplastics sub-project found this process more difficult, because the partners were creating a new network, and attempting to engage stakeholders they had not worked with before. For this team, Asher Minns provided useful advice in an online meeting, encouraging the partners to consider new ways to engage people that may not know about microplastics. This was a stimulating session, with lots of creative thinking about using art galleries, high school competitions and festivals to raise awareness of the topic of microplastic pollution.

3.2.4   Recording activities and engagement

Each sub-project team carried out a wide range of engagement activities, and these are described in Appendix 2.

The administration team set up a spreadsheet for each sub-project to record their activities (e.g. fieldwork, meetings with industry/policymakers, news articles, films, blogs). Each partner was encouraged to update this regularly on OneDrive. Perhaps unsurprisingly, whether for IT reasons or workload, the partners did not update this spreadsheet. In practice, the administration team were required to collate evidence of activities and engagement through email exchange, updates from PIs and RAs, and online meetings with the sub-project partners.

The advantages of the administration team doing the recording were:

- the project teams in country were freed up to concentrate on their work
- the administration team ensured recording was done consistently and diligently
- the administration team ensured information was collected in required format for reporting to UKRI.

The disadvantages of the administration team doing the recording were:

- the administration team could miss some activities or engagement
- the administration team needed to validate some of the information with partners before submitting
- a lot of chasing was required to collect all the information.

3.2.5   Evaluating activities and engagement

Each sub-project team met online in early 2021 to evaluate progress on impact and engagement and to revisit communication plans drafted a year before. Asher Minns encouraged the teams to revisit their communication plans anyway, but this was especially important in the content of the COVID-19 pandemic and the associated extension to the project by nine months (and subsequently a further three months). With support from Asher Minns and the administration team, the sub-project teams were able to identify which parts of the communication plan had progressed well, which needed adapting in the context of the pandemic, and which elements needed to be prioritised in the remaining time.

At the interim evaluation, the discussion centred on the communication plan tables (Appendix 1), and did not use the stakeholder matrix part B (Figure 8). In practice, the partners were much more interested in the messages and activities rather than listing and ranking all the different stakeholders. We learned through the GRTA project that evaluating engagement with each stakeholder is easier to do at the end of the project rather than at regular intervals throughout, despite our best intentions to evaluate more frequently.

3.2.6 Impact of COVID-19 on engagement strategies

There were three common themes which emerged from the evaluation sessions about how the pandemic had affected engagement strategies:

1. **Reduced policy maker engagement** – each project reported that influencing policy makers, a key stakeholder group for the GRTA projects, was much more challenging since the pandemic. This is because policy makers had been understandably focussed on the emergency of COVID-19, with less time and attention for other policy issues.

2. **Online instead of in-person events** - the projects had originally planned to attend international seminars and conferences to present their findings, or host policy roundtables or workshops to share findings with stakeholder groups. The pandemic ruled out almost all in-person events, meaning a move to online. Although online events have advantages in terms of accessibility, they do not function as well for networking and relationship building.

3. **Alteration in plans for outputs** – most of the sub-projects had planned for the impact team (filmmakers and/or creative writer) to visit them to carry out interviews and filming to produce films and written outputs. The inability of the UEA impact team to travel because of COVID-19 meant a change in strategy. The team shifted to using video conferencing to film interviews with researchers using their mobile phones, and sub-contracting collection of film footage to in-country videographers. This was hugely frustrating for the impact team, who were not able to experience the projects in the same way, and who encountered logistical challenges with gathering interviews and footage remotely. However, it did provide work for small businesses in the ODA countries and developed useful skills for the researchers involved in partner countries.

4.   Conclusion

The Global Research Translation Award was a large complex project with a substantial budget and a short timeframe. This working paper has set out a model which was used successfully to manage the project and coordinate impact and engagement activities.

Based on our experiences we make the following recommendations (Figure 10) for multi-national interdisciplinary research projects.

1. Fund project managers!
Including a fully funded administration team based at UEA who were dedicated to the project was crucial for coordinating activities, measuring impact and showcasing achievements.

2. Invest in creatives!
Involving an impact team of filmmakers and creative writers provided specialist resources for the research teams to embed engagement activities within their workplans.

3. Train and equip researchers!
Providing stakeholder engagement training sessions and expert input for each sub-project ensured that engagement was considered as an integral part of the projects and not an added extra.

4. Engage early!
Developing stakeholder maps and communication plans at the start of the project was critical for building energy and momentum to reach out to influential stakeholders early on.

5. Review and evaluate!
Checking on progress of communication plans at regular project meetings was essential to keep focus on engagement, and to adapt plans to new circumstances such as Covid-19.

Figure 10: Recommendations for engagement strategies in multi-national research projects

Appendix 1: Communication Plans

A1.1   Child Malnutrition Communication Plan

The Child Malnutrition project put together a communication strategy (Table 1) as the central part of their communication plan.

Message/Product *What is the new message or product from your research?*	Audience *Who is the stakeholder that you will communicate this message to?*	Channel *What medium will you use to get your message across?*	Outcome *What is your intended outcome? Be realistic!*	Evaluation metrics *How will you measure if you have achieved your outcome?*
New technology: UEA core technology developed by regional partners to suit their regional-specific sub-type of micronutrient deficiencies	Local manufacturing contractors;	Technology, training and support	Prototype formulations of the regional specific supplement product ready for pilot trials based on specific regional needs	At least two of DAC nations complete consumer trials and engage discussions with potential licensees; Follow up interviews
	Regional partners and regulatory bodies	Meetings with key personnel at these organisations; Market research with market analysers and agents;	Clear & refined commercialisation plan; Approval processes for product marketing	80% of consultations with regulatory bodies and relevant stakeholders scheduled and 50% of the meetings take place; Follow up interviews
New product: cheap, palatable product covering child nutritional deficiencies	Health-related government departments	Meetings with key personnel at these organisations	Engage and establish dialogues with policy makers to pursue partial government subsidisation	Scheduled meetings in at least two DAC nations; Follow up interviews
	Consumer groups (schools, nurseries and households)	Educational leaflets written in collaboration with the creative writer Jean McNeil	to build awareness of micronutrient deficiency and increase the likelihood of product adoption	Educational leaflets printed and ready for distribution; Follow up interviews
	General public	Press releases in local influential newspapers; Short movie in English & regional languages	Increased awareness of child malnutrition, wellbeing & engagement with wider public	Public viewing and engagement of creative news; Follow up interviews

Table 1: Child Malnutrition Communication Strategy

A1.2 Family Literacy Communication Plan

The Family Literacy project put together a communication strategy (Table 2) as the central part of their communication plan.

Message/Product *What is the new message or product from your research?*	Audience *Who is the stakeholder that you will communicate this message to?*	Channel *What medium will you use to get your message across?*	Outcome *What is your intended outcome? Be realistic!*	Evaluation metrics *How will you measure if you have achieved your outcome?*
New model: A new concept of family literacy based on indigenous intergenerational learning	Key international stakeholders	International seminars and conferences: • Launch event in Manila • Seminar in UIL* Hamburg • Final seminar at UNESCO Paris	Greater dialogue and cross-cultural fertilisation of family literacy ideas Sectors outside education (IFAD, WHO) recognise need for family literacy approach	
	Government and NGO stakeholders in each partner country	Stakeholder workshops within each country; Policy focused research reports including policy guidance	Integration into national policy and strategies	
	Government and NGO stakeholders in each partner country	Development of: • literacy materials • films • training guides	Approach being used in Government/ NGO facilitator training and literacy programmes	
	Key international stakeholders	Case studies of good practice on UIL* database; policy briefing paper	Enhanced understanding and engagement with debates on family literacy by key international stakeholders	
	Academic research networks	Special Issue journal; Website and blog	Stronger conceptualisation of family literacy within debate on lifelong learning and education	
	Parents and youth in Philippines	Mobile app 'one-stop centre' to share experiences, access resources	Collaboration and support	

Table 2: Family Literacy Communication Strategy

A1.3   Microplastic Communication Plan

The Microplastic project put together a communication strategy (Table 3) as the central part of their communication plan. Updated at workshop 23/02/2021, new actions highlighted in yellow.

Message/Product *What is the new message or product from your research?*	Audience *Who is the stakeholder that you will communicate this message to?*	Channel *What medium will you use to get your message across?*	Outcome *What is your intended outcome? Be realistic!*	Evaluation metrics *How will you measure if you have achieved your outcome?*
New product: Analysis kits to measure microplastic pollution	Staff at organisations identified to use the kits (UMT, INOS, DHI, Reef Guardian)	2. A multi-lingual video instruction manual (developed by Christine Cornea) 3. A co-ordination centre for the programme in UMT	A network of people collecting accurate data using the kits and reporting it to a central location	Questionnaires to users of the kits to determine the quality of the video to inform use; Number of organisations joining the network
New data: Distribution maps showing levels of microplastic pollution collected from the kits	Policy-makers in government and NGOs (WWF, WCS, MNS)	2. Film and education resources 3. GEO Blue Planet marine litter initiative 4. NOAA NCEI Global Marine MP database 5. Stakeholder meetings	Inform policy decisions and actions to reduce microplastic levels	Interview key members of staff in government agencies? Questionnaires about what government are doing in relation to microplastics
New findings: Analysis kits easily and cheaply show levels of microplastic pollution in Malaysia Impacts of Pandemic PPE	General public in Malaysia; Malaysian media; Green Film festival at UEA	2. A public information documentary film (developed by Christine Cornea) 3. Media articles and blogs e.g. Borneo Post 4. INOS Gallery exhibition at UMT	An increased level of understanding about microplastic pollution	Before and after surveys at film screenings?
New model: Test model of approach to enable roll out to other countries in region.	Agencies in other countries in region; International agencies like CEFAS and NGOs.	2. End of project workshop to review project and celebrate successes (could include an outward focussed day for other countries looking to start a microplastic network) 3. Academic reports	Determine how the network can be continued and extended to other countries	Have connections been made with institutions to gauge level of interest? Yes! Proposal to expand into Thailand and Philippines. Pan-African microplastics network newly established.

Table 3: Microplastic Communication Strategy

A1.4 Sustainable Food Systems Communication Plan

The Sustainable Food Systems project put together a communication strategy (Table 4) as the central part of their communication plan.

Message/Product *What is the new message or product from your research?*	Audience *Who is the stakeholder that you will communicate this message to?*	Activities *What are you going to do?*	Channel *What medium will you use to get your message across?*	Outcome *What is your intended outcome? Be realistic!*	Evaluation metrics *How will you measure if you have achieved your outcome?*
Importance of dietary diversity for good health	Younger members of the community	1. Content Generation (Videos, Short Stories, Photo Essay, Audio Interviews)	Chirag app for younger generations, IVRS for non-smartphone users	Better understanding & awareness around SFS & dietary diversity	Level of engagement with Chirag, Endline FGDs/survey
Importance of womens' leadership & mobilization for SFS from production & collection to consumption	Women's Self-Help Groups	1. Content Generation (Short Stories, Audio Interviews) 2. Theatre, Mud-wall painting 3. Recording comments on mobile	Attending group meetings, IVRS, Village level meetings, Local Haats (markets)	Better understanding & awareness around SFS & Dietary diversity	Level of attendance at events & Level of engagement with Chirag, Endline FGDs/survey
Having a diverse diet is tasty and good for your health	Children and young adults	1. Kitchen Garden 2. Digital Herbarium 3. Picture books 4. Baal Mela festival	Learning materials for school, supplementary centers	Convergence of understanding around diet leading to health and nutrition improvements	Number of children accessing Picture Books, Digital Herbarium, Kitchen Garden, attending Baal Mela
Importance of contextual food system & their role in sharing information	State frontline workers/ endpoint service delivery functionaries, government departments and institutions	1. Developing Training materials & tools 2. Training 3. Process documentation of Creative hub and Digital Portal	IVRS, Chirag App, Workshops	Better understanding & awareness around SFS & Dietary diversity	Evaluation after training, Tracking the App usage, Endline FGDs/survey
Upscaling Grassroots Innovations for SFS, Recognizing SFS as central to achievement to SDGs	Relevant depts & agencies (State, District, National), MPs, MLAs, Influencial local media, Local Govt Institutions	1. Presentation of Processed documents 2. Policy Briefs in Local Language 3. Constituency based roundtables	Roundtables, working groups and briefing notes, Grievance Redressal Portal, Print-Television-Social Media	Understanding of research messages and embedding into policy documents	Level of attendance at events, Follow up interviews to see if understanding and practice have changed
Importance of recognizing the grassroot innovations & local food system for sustainable health & nutrition outcomes	Universities & Higher Education Institutions, National Family & Health Resource Centers, National Skill Development Corporation	1. Sharing of process documentation 2. Draft Curriculum 3. Reviewing school lessons for nutrition component	Roundtables, working groups and briefing notes, face to face meetings, print-television-social Media	Integration of contextual content of SFS in mainstream	Face to Face follow up interviews

Table 4: Sustainable Food Systems Communication Strategy

Appendix 2: Description of GRTA engagement activities

The GRTA project used a range of engagement methods which varied across the sub-projects, some activities were used on all projects, and some were specific to their context. This appendix describes the activities in more detail.

A2.1 Child Malnutrition sub-project engagement activities

Project summary: Child Malnutrition project partners in Brazil, Jordan, Malaysia and Thailand developed micronutrient supplements with regulatory bodies and regional manufacturers using locally sourced materials, building their research and development (R&D) capabilities to enable future development of similar products independently. Creative writing and film-making activities enabled communication with users (children, youth and parents), the general public and the local government on the importance of a balanced nutritional diet for child growth and development, and the complex causes of malnutrition.

A2.1.1 School and community visits

The project focus on meeting nutritional needs of children meant the researchers in each country had to establish current eating habits, nutritional requirements and preferences of their target populations. The Thai team visited schools in two locations to carry out surveys of eating habits. The pandemic limited the ability of other teams to visit schools and communities in person, although the Malaysian team had knowledge about their target indigenous communities from previous research. Each of the teams were able to access national data to determine the malnutrition information for their countries and therefore design an appropriate supplement.

A2.1.2 Taste tests

The partners developed prototype supplements in the laboratory and received ethical approval to carry out taste testing in the community. The purpose of this engagement activity was to determine whether the formulation - chewable tablet (Brazil and Jordan), gummy sweet (Thailand) or dissolvable film (Malaysia) - was acceptable to children both in terms of ability to consume and in terms of flavour. Some of the partners developed a range of flavours to determine which was more popular.

A2.1.3 Engagement with policymakers and regulators

To successfully develop a micronutrient supplement for public use, the teams had to receive regulatory approval for their products from their respective government bodies. The teams met with regulators and their production facilities were audited before approval was received. The teams also arranged meetings with medical officers and health departments to demonstrate their prototypes and ascertain the interest of policymakers for adopting the supplements into wider use.

A2.1.4 Engagement with industry

In Brazil and Jordan, the partners were developing chewable tablet formulations which could be produced by industrial partners in their respective countries. They identified an appropriate industrial partner early on in the project and worked closely with them to co-develop the prototype. In Jordan, the industrial partner Sana Pharma, joined the GRTA project as a collaborator and employed a Research Associate through the grant.

A2.1.5 Engagement with third sector

The partners also engaged with key Non-Governmental Organisations (NGOs) to develop links with target community groups, for example, in Malaysia, the partner built relationships with a committee representing the Orang Asli indigenous peoples group. In Thailand, the team were developing an open source, low-cost and simple production process for their gummy supplements, which could be implemented at a community level, so the partner engaged with local community groups and village committees to explain how they could transfer the technology.

A2.1.6 Online conference

In February 2021, PI Sheng Qi hosted an online conference. The partners presented preliminary results of their laboratory research, speakers from government and industry sectors presented talks on micro-nutrient deficiencies, and the UEA impact team led a session with the partners to plan educational leaflets and films. The original plan was to have a conference in person at UEA, but the pandemic prevented this, and the online substitute worked very well.

A2.1.7 Educational leaflets

An important aspect of the Child Malnutrition project was raising awareness of the hidden burden of micronutrient malnutrition in each of the countries. The UEA impact team worked closely with the partners[1] to develop educational leaflets specific to each country in their own language which explained the micronutrient deficiencies prevalent to their country and/or cultural context, and how this could be overcome through the supplements developed by the GRTA project. These leaflets were created by designers from Malaysia, Thailand and the UK and co-written by the UEA impact team and the partners in each country.

Figure 11 shows two examples of artwork from the English versions of the educational leaflets. They are available on websites and were distributed in print form to education and health providers in each country.
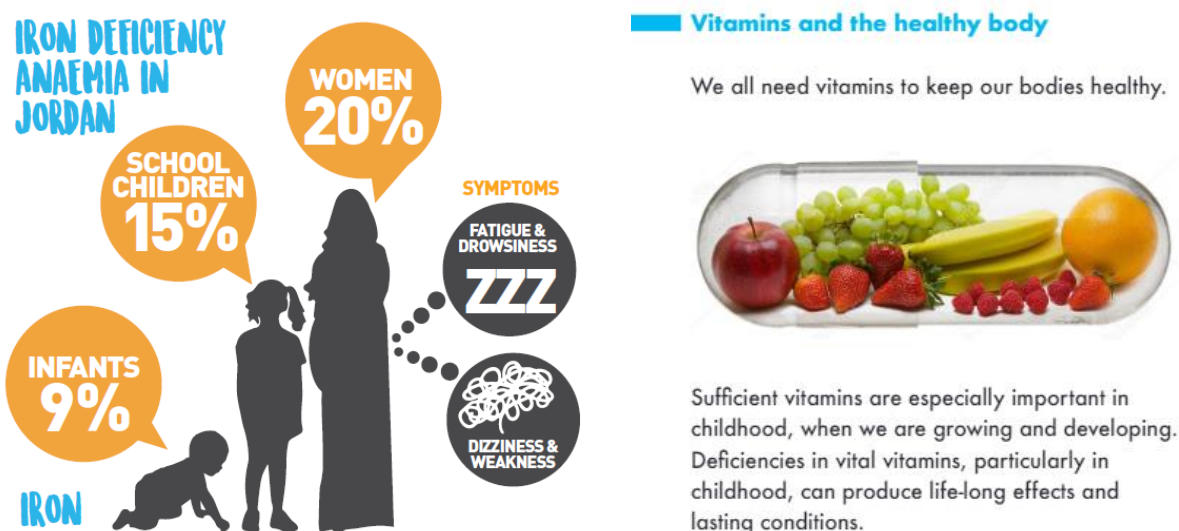

Figure 11: Excerpts from the educational leaflets produced for Jordan (left) and Malaysia (right)

A2.1.8 Educational film

The Child Malnutrition project had some budget to send a filmmaking team and a creative writer to the partner countries to collect footage, interviews and insight for an educational film. Unfortunately, the pandemic meant that travel was repeatedly postponed and eventually cancelled altogether for this aspect of the project. Instead, creative writer Jean McNeil recorded interviews with the partners via video conference to find out about their research. The administration team and the filmmaking team contracted filmmakers in the partner countries to collect footage from the laboratories and target community locations. Christine Cornea and Alex Smith filmed the PI Sheng Qi at UEA, and then painstakingly combined and edited these different elements. This was a lengthy and complex process, but the end result is a 20 minute documentary titled 'Tackling Child Malnutrition in Developing Countries', which also has a shorter 10 minute version.

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[1] University of Sao Paulo in Brazil officially joined the GRTA project later than the other collaborators, therefore they were not included in the leaflet or film production activities.

A2.2 Family Literacy sub-project engagement activities

Project summary: Family Literacy project partners in Ethiopia, Nepal, Malawi and the Philippines developed a more sustainable, relevant and 'bottom-up' approach to family literacy. Each country team carried out comparative ethnographic studies on indigenous approaches to intergenerational learning and knowledge creation, alongside documentary analysis of existing family literacy programmes in these countries. They observed how literacy is embedded in people's everyday activities and indigenous learning practices, and how it influences family well-being and livelihoods. The project included research-policy interaction and dissemination activities to engage international, national and local stakeholders, bring attention to the disjunction between current mainstream approaches to adult/family literacy instruction and the ways in which adults and children learn in everyday life, in order to enhance the contribution of education to sustainable development.

A2.2.1 Webinars

The Family Literacy team have been working together since before the GRTA project, as part of the [UEA UNESCO Chair in adult literacy and learning for social transformation](). The team quickly adapted to remote working through the pandemic and ran a number of webinars to share research findings and learning from the project.

A2.2.2 Mentoring programmes

Project partner Tribhuvan University Research Center for Educational Innovation & Development (CERID) in Nepal has run a series of online workshops and mentoring programmes for early career researchers on the theme of adult literacy. These sessions included 30 researchers from 11 colleges across Nepal.

A2.2.3 Postgraduate research forums

Project partner University of Santo Tomas in the Philippines has run a number of forums for postgraduates on the theme of adult literacy throughout the project. The first forum was held in person for participants in Manila, the following forums were held online with wider participation, with over 100 participants from 10 countries attending some of these events. Project partner Bahir Dar University in Ethiopia ran a workshop for postgraduate researchers on health literacy in July 2021, and project partner University of Malawi ran workshops for postgraduate researchers on health literacy in April 2021.

A2.2.4 Social media photo competition

In September 2020 the team ran a social media photo competition on Twitter and Facebook to mark International Literacy Day. Participants were encouraged to post a picture answering the following questions using the hashtags #FamiliesLearningTogether #LiteracyInFamilies: How are you and your family learning together during the COVID-19 pandemic? What does literacy look like at home and in your community? The winners would be featured in an international event with UNESCO and also receive a prize. However, there was very little engagement with this, so it was abandoned.

A2.2.5 UNESCO events

The Family Literacy project originally planned two major dissemination sessions in Paris and Hamburg as part of flagship UNESCO literacy events. However, Covid-19 altered the plans, and these events were run online instead. In September 2021 the team hosted an online symposium at the UKFIET (The Education and Development Forum) Annual Conference. In December 2021 the team co-hosted a session with UNESCO UNESCO's Section of Youth, Literacy and Skills Development and the UNESCO Institute for Lifelong Learning for a global audience of policymakers, educators and NGOs.

A2.2.6 Online course

The team used some unspent international travel budget to develop an additional output from the project. The team have developed a module for an online course for professional educators who are planning Family and Intergenerational Literacy and Learning (FILL) programmes. The course is run by the UNESCO Institute for Lifelong Learning and the Commonwealth of Learning. This course targets a wide range of education professionals, from civil society organizations, non-governmental providers and government institutions, it is free of charge and is held online.

A2.2.7 Blogs and newsletters

The project partners have worked together to produce a series of blogs that have been published by UEA, UKFIET and BALID (British Association for Literacy in Development). The UEA UNESCO Chair team also produce bi-annual e-newsletters that are sent to a mailing list of interested stakeholders, and the GRTA project has featured during the project lifetime.

A2.2.8 Country reports

Each country team published a research report based on their own fieldwork, set in the context of their national policy landscape. These reports were professionally produced with the help of graphic designers, proof readers, and 'critical friends' (academic experts from the family literacy field). Each report is available online to download and has been printed for distribution to policy makers, educators and NGO practitioners throughout their country.

You can view the reports at the links below:

- Ethiopia GRTA research report
- Malawi GRTA research report
- Nepal GRTA research report
- The Philippines GRTA research report

A2.2.9 Synthesis report

In August 2021, the Family Literacy team published a synthesis report from research carried out through the Global Research Translation Award:

- Family Literacy, Indigenous Learning and Sustainable Development: Ethnographic Insights from Ethiopia, Malawi, Nepal and the Philippines (ISBN 9781870284028)

This report is the result of a rich process of research and reflection and brings together the findings and analysis from the in-depth country research reports and literature review papers.

The first section of this report draws on the literature review led by Dr. Chris Millora and Hélène Binesse, with contributions by Dr. Ulrike Hanemann, Dr. Sheila Aikman and Professor Anna Robinson-Pant. The comparative analysis section of this report was written by Dr. Sheila Aikman and Professor Anna Robinson-Pant, in collaboration with the whole team. Dr. Catherine Jere and Dr. Ulrike Hanemann commented on the report as critical friends, particularly from a policy perspective.

A2.2.10 Country films

Each country team received additional funding from the UEA core budget when international travel was cancelled to enable them to contract filmmakers in their own countries to create documentary films about their ethnographic research. The teams invited the filmmakers along to their fieldwork locations to collect footage showing how literacy and learning is embedded within everyday practices, livelihoods, crafts and traditional culture. The teams wrote scripts for these films and learnt about the filmmaking process. These films are a valuable visual record of the ethnographic research to supplement the formal written reports and will be used in policy meetings and early career research training once the project concludes.

A2.3 Microplastics sub-project engagement activities

Project summary: Microplastic project partners in Malaysia built a network of academics, industry partners and policymakers in Malaysia to identify and quantify the distribution of microplastics and assess potential environmental risks. Low-cost analysis kits for microplastic monitoring were sent to Malaysian universities. Alongside supplying simple equipment, the network developed a multilingual video manual to aid its use and ensure consistency of practice for data comparisons. A public information film was created to raise awareness of microplastic pollution, and research findings were communicated to the general public and policy influencers through a range of engagement strategies.

A2.3.1 Video tutorial

A key component of the Microplastic sub-project was sending analysis kits to institutions in Malaysia to create a network of researchers able to monitor microplastic pollution. The UEA filmmaking team created a video tutorial to instruct researchers how to use the analysis kit. This was filmed at UEA at the beginning of the project, featuring Dr Yet Yin Hee, a research associate from Universiti Malaysia Terengganu (UMT) who was on a Fellowship at UEA in 2019. The film is available in English and with Malay subtitles, with over 2,700 views to date.

A2.3.2 Educational films

The UEA filmmaking team created a series of educational films based on microplastic pollution and monitoring through the GRTA project:

- Dr Andrew Mayes - Microplastics Research 2021 (short)
- Dr Andrew Mayes - Microplastics Research 2021 (long)
- Establishing a microplastic monitoring network in Malaysia
- Microplastics in the food chain - mini animation
- Hidden Plastics: The Teabag Experiment

The final two films have featured in the International Science Film Festival organised by the Goethe Institute between 1 October and 20 December 2021, 'Hidden Plastics' was screened in Bangladesh, Egypt, India, Iran, Myanmar, Pakistan, Palestine, the Philippines, Sri Lanka and Vietnam and 'Microplastics in the Food Chain' was screened in Malaysia, Namibia and Vietnam.

A2.3.2 Engaging new partners in the Malaysian Microplastic Network

Another key component of the Microplastics sub-project was to establish a network of Malaysian institutions interested in monitoring microplastic pollution. The team created a new website for the Malaysian Microplastic Network, which currently has ten partners shown on this map:

- Borneo Marine Research Institute
- Kuching Beach Cleaners Association
- Reef Guardian
- Swinburne University of Technology, Sarawak
- Universiti Brunei Darussalam
- Universiti Kebangsaan Malaysia
- Universiti Malaysia Sarawak
- Universiti Malaysia Terengganu
- Universiti Putra Malaysia
- WWF Malaysia (Sarawak)

The project ran an online Symposium for the wider Malaysian Microplastic Network on 8 and 9 December 2021 to share results of their research and encourage future collaboration. Representatives from other countries in SE Asia who are working on microplastic research were also invited to hear about lessons learnt from the Malaysian project. This included Thailand, Singapore, Japan and the Philippines.

A2.3.4 Engagement with schools and community

The two project partners in Malaysia, UMT and Swinburne University of Technology, organised a series of engagement activities with schools and local communities, a selection is shown in Figure 12.

School workshop	Local school visit to inform children about reducing plastic waste and responsible use. Staff from UMT ran a session for 32 children (10 years old) called 'Small Hands Change the World'. Learning outcomes: i. 3Rs (reduce, reuse, recycle) ii. sorting materials iii. recognise what can be recycled and separate materials accordingly.	
Beach Clean in Terengganu, Malaysia	Universiti Malaysia Terengganu co-hosted a beach clean on World Ocean Day (19 September 2020) where 150 people collected 550kg of litter	
Art gallery exhibit	Universiti Malaysia Terengganu runs an art gallery open to the public. The Microplastics project have installed an interactive exhibit in the gallery for visitors to learn about microplastic pollution and look through a microscope to see microplastic fragments collected from local habitats.	
Precious plastic kit	Swinburne University of Technology in Sarawak invested in some items from Precious Plastic through a related QR-award from UEA. This equipment will enable plastic waste to be repurposed into useful items for sale at Swinburne, and educate students in engineering solutions to plastic waste.	 Image: Dave Hakkens - Precious Plastic (CC BY-NC 2.0)

Figure 12: Engagement activities with schools and communities

A2.3.5 Online engagement activities

The project ran various online engagement activities. The GRTA administration team hosted Twitter campaigns to coincide with events and international interest days, for example World Oceans Day. The team wrote blogs about the impact of PPE on plastic pollution while the profile of PPE was high during the Covid-19 pandemic – one focussed on the UK and one on Malaysia. Moritz published a column in the Borneo Post newspaper about microplastics and the project. Both partners presented information about the project and research findings in webinars. Andrew Mayes' research on plastic in teabags featured on a BBC programme called 'War on plastic' which increased the visibility of the project.

4.3.6   Policy engagement

The UMT team engaged with regional government in Terengganu to inform new policy around marine spatial planning and management of waste. The Swinburne team engaged with the Maritime Institute of Malaysia (MIMA) to inform marine litter policy at a national level.

A2.3.7 NGO engagement

WWF Malaysia partnered with the GRTA Microplastics project through a spin-off QR-funded project to investigate levels of microplastics in drinking water sources around Malaysia. The WWF team collected water samples from villages across Malaysia and sent them to UMT and Swinburne for analysis.

A2.3.8 Online symposium

The Microplastics project hosted an online Symposium in December 2021 to share the research findings and learning from setting up a microplastic monitoring network in Malaysia. This event was held on Microsoft Teams over two half-day sessions:

- Day 1 focused on Microplastics in Malaysia, reviewing the progress of the recently established Malaysian Microplastic Network (MyMiP) and discussing how monitoring of microplastic pollution can feed into advocacy, education and policy.
- Day 2 focused on Microplastics in SE Asia, highlighting existing and upcoming microplastic monitoring initiatives around the region and further afield, and discussing how these initiatives can connect and support each other going forwards.

Researchers from the UK, Malaysia and SE Asia spoke at the Symposium, as well as policy makers, educators and NGOs who have been involved in the GRTA project.

A2.4 Sustainable Food Systems sub-project engagement methods

Project summary: Sustainable Food Systems project partners were working in India with communities, especially women's groups, youth groups and students to generate and share knowledge on sustainable food systems, in particular production choices and technologies, diets and consumption practices, and their relationship to health and nutrition outcomes. Using a range of creative tools and strategies, partners and communities generated digital content which was shared through an interactive, audio community media platform; supplemented by a mobile app for smartphone users, to provide 24-hour real-time response to community needs. The partners also engaged in capacity-building of educational institutions, government functionaries and the wider public at multiple scales - local, regional, national and international.

The SFS project used a wide range of engagement methods to achieve these objectives, many of which are summarised in this webinar: Youth-led creative learning practices amongst indigenous communities in India; and outlined in more detail in the following section.

A2.4.1 Interactive Voice Response Service

The Interactive Voice Response Service (IVRS) is an innovative communication tool provided by project partner Gram Vaani. See blog "Using An Interactive Voice Response System (IVRS) To Share Knowledge About Dietary Diversity" which describes how an IVRS works in more detail. The concept is people call a number from their standard mobile phone, the call hangs up and rings them back immediately. The person can choose from a menu to listen to audio content, submit their own audio content or interact with surveys and quizzes. The audio content is either Studio Generated Content (SGC) produced by the project partners or User Generated Content (UGC) produced by community members themselves. There is content available in Hindi and local tribal languages. The IVRS in the Bihar research site was launched in April 2020, and by January 2021 it had received over 20,000 calls from 3,408 unique callers. The average call duration is almost 7 minutes, and there is a good spread of gender, age and tribal status. These statistics show that the IVRS has been embraced by the many members of the community. During the height of the COVID-19 lockdown in India, the IVRS was used to share validated health information and to enable community members to find out where to access support and rations. The IVRS in the Odisha research site was launched in March 2021.

A2.4.2 Chirag App

The Chirag App is a similar tool to the IVRS, but through the medium of a smartphone app. Much of the content produced for the IVRS can be accessed on the app, with the addition of videos and photo content on a smartphone. This app has been developed by partner Gram Vaani during the GRTA project with an additional injection of UEA's QR Rapid Response funding. The app is targeted at the younger community members and will be available to download from the Play store, and although content is targeted for the GRTA research sites, it could be downloaded by anyone around the world. In addition to the general public, the project partners can direct frontline health and education workers to use the Chirag app to access information about sustainable food systems and can also use it as a tool to show policy makers the impact that their research is having in each community.

Both the Chirag app and the IVRS have a significant advantage over other forms of engagement, with respect to evaluation. The team can measure engagement through analytics built into the system, but they can also set up surveys before and after specific education campaigns on the IVRS and the app. For example, the team ran a campaign in March 2021 on the importance of including a range of different food groups in your diet. They can set up quizzes before and after to measure knowledge improvement and behaviour change.

A2.4.3 Social media campaigns

All three Indian partners have a vibrant social media presence which regularly featured stories about GRTA research activities and promoted events and blogs:

- Gram Vaani: @GramVaani | FB GramVaani
- PRADAN: @PRADAN_India | FB PRADAN
- Kalinga Institute for Social Sciences: @kissfoundation | FB KISS Foundation

The GRTA project's twitter account engaged with these campaigns, and also ran some specific campaigns related to the Sustainable Food Systems project around particular days of interest, e.g. International Youth Day, International Day of Indigenous Peoples, as well as aligning with significant events such as the UN Food Systems Summit in September 2021.

A2.4.4 Films (participant films, youth club films, professionally produced films)

Filmmaking formed a significant part of this sub-project. A central objective was to equip and train the community groups in the two research locations to make their own films. Two UEA-based filmmakers (Christine Cornea and Alex Smith) travelled to India in March 2020 (fortuitously, just before the COVID-19 pandemic restricted travel) for an intensive few weeks of training sessions. The team trained community members in tribal villages in Bihar and Odisha states, showing them how to use cameras, how to plan a film using a story-board process, and how to carry out editing of films. The community groups received cameras from the project and were encouraged to continue making films about their livelihoods, traditional foods from the forest and recipes.

The outputs from this process were three types of films:

1. Community films – filmed and edited by the community groups themselves, shared on their own social media channels, e.g. Hako chutney
2. Remote-produced participant films – community groups worked with UEA filmmakers remotely to plan a film. The community members collected the film footage themselves, and sent it to the UEA filmmakers to edit the final version, e.g. Ortua Oo | Food During COVID-19
3. Professionally-produced participant films – community groups worked with UEA filmmakers to plan a film whilst they were visiting the area. The UEA filmmakers collected the film footage using high-quality equipment and edited the films when back in the UK, e.g. Aat Aser | Food from the Forest.

The community film process has been particularly successful with a community group in Bihar called the Lahanti Club, a youth group of volunteers working to empower tribal communities – they have produced over 40 films independently to share local knowledge of food sustainability. Whilst the films may not be perfectly shot or edited, they each cover a topic important to the community, sharing knowledge and developing digital skills.

The remote-produced participant films were developed during the pandemic, and one film was produced for each research site. The Bihar film focussed on an important food called Ortua Oo (mushroom bread) made from foraged ingredients at a time when markets were shut due to the national lockdown. The Odisha film focussed on the impact on the COVID-19 crisis on the rural markets. Both films demonstrate the resilience of the communities to find nutritious food during difficult times and to co-create a film across long distances.

The professionally-produced participant films were created for each of the two research sites. The Bihar films focussed on foods foraged from the forest and how to prepare them to eat. The Odisha films looked at the uses of the locally abundant Mahula flower, and the socio-economic impact of a eucalyptus plantation. These films are high quality and will be targeted for use with policymakers and funders.

PRADAN and KISS both submitted a film produced by their local community groups to an international film competition connected to the UN Food Systems Summit, which were subsequently shortlisted and profiled on international online events. Food from the Forest: Kanthe Ara, Huter Baha, Kaath Oo was selected for the International Science Film Festival and was screened in 4 countries (Bangladesh, India, Pakistan and Sri Lanka) during the festival period 1st October to 20th December 2021.

A2.4.5 Press releases and blogs

The Sustainable Food Systems project produced 12 blogs which were published on the UEA website and on partner websites where appropriate. The team curated a research story which was promoted by UEA to coincide with UN Food Systems Summit in September 2021, highlighting the impact of ODA funding for innovative research in developing countries. Nitya Rao also organised press releases around publications related to the project and published this article in The Conversation: India's coronavirus lockdown will hit women and migrant workers hardest.

A2.4.6 Creative participatory practices

The teams used creative practices to engage with community groups in tribal areas where there are high levels of illiteracy, a selection is shown in Figure 13.

Theatre workshops	A participatory activity, where people discuss the nutritional and medicinal benefits of wild foods, and then create drama and song to instill their learning.	
Mud wall painting	A participatory activity infusing the traditional Santhal practice of mud wall painting with symbols of nutrition. This wall painting is usually done to mark the *Sohrai* festival.	
100 seeds exercise	A participatory activity to understand a typical weekly food platter during the winter season, and discussion of how to improve nutrition through consumption of different food groups.	
Rangoli art	Rangoli is a form of art originating in India, where patterns are created on the ground using colourful materials like rice, flour, sand or flower petals. As the group created their art, the team discussed the nutritional value of the different food items.	

Figure 13: Examples of creative participatory activities used by the PRADAN team

A2.4.7 Curriculum components

The team created curriculum resources to improve understanding around dietary diversity for a range of scales:

- Modules for schools to educate children
- Modules to train youth groups
- Modules to train frontline workers, for example health centre workers (*Angarwadi*)
- A new Massive Open Online Course (MOOC) called Creative Communication, Extension and Community Resource Management for Sustainable Development has been designed in partnership with IGNOU (India's Open University) to train government officials and development practitioners about equitable and sustainable food systems.

A2.4.8 Policy briefs and meetings

This aspect of the work has been severely impacted by COVID-19, diverting government attention away from usual avenues of advocacy and lobbying that would be employed by development organisations. Despite this, the team have created a series of policy briefs in preparation for when engagement with policymakers can begin again. These briefs summarise the learning from the project and make recommendations for policy changes and funding decisions.

A2.4.9 Webinars and conferences

The teams have been able to participate and host many online webinars and conferences sharing their findings from the project with the wider academic community, within India and internationally. Significant events include a Dialogue titled 'Women's agency and gender equity in food systems' in the lead-up to UN Food Systems Summit and 'SDGs in the time of Covid-19 Pandemic - Gender and Nutrition Security' webinar celebrating 75 years of the UN.

A2.4.10   Academic publications

The team are preparing manuscripts for publication as the project draws to a close.