

An Indian-Australian research partnership

Project Title: **Livelihoods and social organisation of e-waste reprocessing in India**

Project Number **HSS0602**

Monash Main Supervisor

(Name, Email Id, Phone)

Dr Ruth Lane
ruth.lane@monash.edu

Full name, Email

Monash Co-supervisor(s)

(Name, Email Id, Phone)

Monash Department:

School of Social Sciences

IITB Main Supervisor

(Name, Email Id, Phone)

Prof. Pushpa Trivedi
trivedi@hss.iitb.ac.in

Full name, Email

IITB Co-supervisor(s)

(Name, Email Id, Phone)

Prof. Amit Arora
aarora@iitb.ac.in

IITB Department:

Department of Humanities and Social Science

Research Academy Themes:

Highlight which of the Academy's Theme(s) this project will address?

(Feel free to nominate more than one. For more information, see www.iitbmonash.org)

1. Advanced computational engineering, simulation and manufacture
2. Infrastructure Engineering
3. Clean Energy
4. Water
5. Nanotechnology
6. Biotechnology and Stem Cell Research
7. **Humanities and Social Sciences**

The research problem

Define the problem

Electronic goods and materials make up the fastest growing waste stream in the world. The structure-obsolete of consumer electronics drives new phases of consumption, and much of this material (cell phones, laptops, tablets) moves between countries as second hand goods. While flows of electronic waste from developed countries to Asia have increased, these are now dwarfed by increased flows between countries within the Asian region (Lepawsky 2014). A large and new industry has developed around resale, refurbishing and recycling, centred in key nodes in Asian cities. Despite the lack of environmental and health and safety standards, the industry is now important for the livelihoods of

many thousands of people.

Recent ground breaking work on secondary commodity flows and recycling of end of life ships, electronic waste, clothing and cars, show that flows of used or recycled commodities are more complex and multidirectional than those for new products, are likely to be brokered by multiple actors and appear to be highly volatile (Crang et al. 2012). The heterogeneous qualities of the materials involved strongly influence the creation and capture of value based on 'the arts of making do with what is there' (Crang et al. 2012: 11), and diverse practices of disassembly and reassembly of material components are enabled by movement from one location to another. Trade data only reveals part of the story because secondary commodity flows are not followed as closely as primary flows, and they often involve informal or even illegal activities which are near impossible to capture in trade statistics.

Field studies are needed to ground truth patterns apparent in trade data and to better understand the practices of reuse, repair, refurbishment and recovery of electronic discards. Only through detailed empirical study of reprocessing practices in situ can the performative potential of the materials themselves be understood, both economically and for consequences for health and safety and local environments. Attending to the diverse economic forms entailed in these practices highlights different sorts of issues around justice and equity beyond dumping and its ill effects, though of course these are important (Lepawsky 2014).

Project aims

Define the aims of the project

- To assess existing e-waste supply chain models of formal and informal sectors in India
- To investigate the drivers and dynamics of flows of used electronics through reprocessing centres in one or more Indian cities
- To investigate the social and economic dimensions of work in electronics reprocessing
- To develop understanding of the significance of both formal and informal work in this sector for livelihoods
- To investigate the forms of innovation evident in electronics reprocessing
- To review the regulatory frameworks affecting how used electronics are traded and reprocessed in India

Expected outcomes

Highlight the expected outcomes of the project

- A characterisation of the key pathways and drivers for flows of used electronics through reprocessing centres in select Indian cities
- A characterisation of the forms of employment, both formal and informal that constitute the electronics reprocessing sector
- Review of sources of innovation and change in the sector
- Review of the impacts of relevant regulatory frameworks
- Recommendations for improving working conditions, livelihood and economic benefits linked to the electronics reprocessing sector

How will the project address the Goals of the above Themes?

Describe how the project will address the goals of one or more of the 6 Themes listed above.

As yet there are no specific goals listed for theme 7: Humanities and Social Sciences.

Capabilities and Degrees Required

List the ideal set of capabilities that a student should have for this project. Feel free to be as specific or as general as you like. These capabilities will be input into the online application form and students who opt for this project will be required to show that they can demonstrate these capabilities.

Required:

- Master or MPhil in a relevant social science discipline such as geography, planning and development, sociology, economics or anthropology
- Demonstrated interest in themes of environment, development and sustainable livelihoods in India
- Some understanding of the e-waste reprocessing industry in India and relevant regulatory frameworks

Desirable:

- understanding of political ecology perspectives on resource industries
- experience in the use of qualitative or mixed research methods

Potential Collaborators

Please visit the IITB website www.iitb.ac.in OR Monash Website www.monash.edu to highlight some potential collaborators that would be best suited for the area of research you are intending to float.

Prof. Pushpa Trivedi

trivedi@hss.iitb.ac.in

Dr Amit Arora

aarora@iitb.ac.in

Please provide a few key words relating to this project to make it easier for the students to apply.

Ewaste; social dimensions; livelihood; reprocessing; political ecology