



The RTL Bailey Bridge Initiative

Trans-disciplinary approach in Fostering Agency & Democratizing Science & Technologies

Learning in Action Programme (LIAP) on Fostering Agency, Designing Holistically and Critical Cartography for Field Interventions

Context

Societal studies, and in particular social work, for centuries have made the world a better place to live in through its various interventions; and at the same time science and technology has achieved path breaking significant results in fulfilling the same goal. In this context, we must recognise that technology is value neutral and humanities and social studies do not necessarily operate from a space anchored in universal values.

Problems in society are often complex in nature and require scientific and technological inputs, along with social science interventions. The social sector works closely on these issues but are not necessarily equipped with scientific and technical skills needed to holistically approach the problem and notice patterns and shift the systems and culture.

The *Bailey Bridge Initiative (BBI)* is a result of the Radical Transformational Leadership (RTL)¹ community of practice in India. The most exciting and salient feature is that it is based on the transdisciplinary² CFSR model³ to foster agency⁴ in both the participants and the communities they are engaged with by designing our responses to shift unworkable systems and disempowering social and cultural norms (whole system transformation) based on our universal values. This also realises the full potential of human agency and science and technologies and to address the digital divide in a more humane and holistic way. BBI achieves this by training participants on '*Agency praxis and critical cartography for field interventions*' based on *cutting edge leadership praxis* integrated along with advanced *Free and Open Source mapping (Geo-spatial) tools and techniques* for interventions "***in, with and by***" communities. It also includes transformational design, planning, implementation and monitoring tools for a value based project intervention and simultaneously demystifying advanced geo-spatial tools and technologies to be accessible for even school students anywhere like using smartphones as a GPS receiver.

Dr. Monica Sharma refers to BBI in her book⁵ "It is a transformative learning-in-action program, synthesizing science and technology and social work, as well as leadership skills, competencies, and inner capacities" (2017:279).

¹ Radical Transformational Leadership is based on universal values - the root of our being, to shift unworkable systems and cultural norms to generate enduring and equitable results simultaneously in time (Monica Sharma, 2017).

² Transdisciplinary - "which crosses discipline boundaries to take a holistic approach, in which different experts from different disciplines and professionals create new knowledge and understanding, always informed by universal values of dignity, equity, and compassion—our resonant space of oneness" (Monica Sharma, 2017:279).

³ Conscious full-spectrum response (CFSR) model - a design framework to simultaneously solve problems, shift systems and cultural norms and create enduring results sourced from universal values (Monica Sharma, 2017).

⁴ By 'agency' we essentially mean 'the freedom and capacity to live and act in a defined world based on our inner power and the universal values we embody and stand for'.

⁵ Monica Sharma (2017). *Radical Transformational leadership: Strategic Action for Change Agents*. California: North Atlantic Books.

The award-winning book - '*Radical Transformational Leadership: Strategic Action for Change Agents*' that uses a unique response model based on extensive application - a conscious full-spectrum model - which simultaneously solves problems, shifts systems and creates new patterns sourced from universal values. The book is the winner of the 2017 Nautilus Gold Book Award for Business and Leadership. Past winners include Desmond Tutu, The Dalai Lama and Thich Nhat Hanh.



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Significance of the Bailey Bridge

The Bailey Bridge⁶ is the most essential and powerful structure which is often constructed in situations of a disaster response and recovery. It is an Engineering structure which is used to restore vital lifelines and connect the affected people with the humanitarian responders. Drawing upon the metaphor from the Bailey Bridge, this initiative aims to close the scholastic gaps that exist between Technology, Physical Sciences, Social Sciences, Social Work and Humanities along with fostering our and others' full potential and agency. By acknowledging this scholastic gap, the Bailey Bridge Initiative has been designed to create a '*bridge of possibilities*' for practitioners.

Purpose

The purpose of the Bailey Bridge Initiative is to foster agency among interested individuals and the communities they are engaging with. In this pilot online workshop, the participants will be trained in fostering agency in oneself and others and will be equipped with the modern and relevant science and technological tools and techniques for informed decision making and social interventions.

Objectives

By providing a platform for peer learning, action and dissemination, this initiative will gear the participants to:

- (a) foster agency for self, and others for informed decision making, action and results in solving problems and shifting unworkable systems and norms
- (b) demystify science and technological concepts, tools and techniques for access and utilisation; and to further share and scale them with communities
- (c) integrate physical, natural sciences and technology along with social sciences using the transdisciplinary CFSR model, in order to design field-level issues holistically
- (d) co-create value-based strategies and interventions along with community members while also building upon their knowledge systems
- (e) support responsible citizen science in communities to build and own the archives of information and knowledge for continuity and action.
- (f) support a responsible citizenry to be 'champions of change' by generating sustainable results through their breakthrough initiatives.

The BBI engages with interested individuals from NPO/NGOs, CBOs and communities who are involved in transformational social interventions be it health, education, access, rights so on and so forth, which leads towards creating a people-centred and ecologically sustainable society that promotes and protects the dignity, equality, social justice and human rights for all, with special emphasis on marginalised and vulnerable groups and is committed and aligned to achieving the SDGs.

The outcomes we are expecting from this workshop/initiative in terms of systems and cultural shifts and norms are:

⁶ Bailey Bridge is a simple yet powerful Engineered solution for connecting people and places. They are used to develop, improve and repair essential infrastructure in urban and rural areas, including the most remote and challenging locations. From restoring vital lifelines in disaster-hit areas, to enabling economic development through essential infrastructure improvements Bailey Bridge has touched humanity from the days of World War II in many ways.



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- Social Science, Development Science and Social Work study and interventions shift from often being theoretical, extractive and study-based to praxis based on values and interventions with focus on results-based action to address issues in society.
- Shifting from visualisation to spatio-temporal visualisation and reasoning for critical and pattern thinking and fostering spatial intelligence using mapping tools and techniques.
- Practitioners and stakeholders in the development sector shift from being partially engaged, compartmentalising work, and with limited commitment to engaging with communities, using multi-disciplinary tools to build skills and foster agency for themselves and the communities, to holistically design using the transdisciplinary CFSR model.
- From only activity based conversations and strategies to that which is both output and outcome based for greater impacts in society.
- From science and technology that is complex, exclusive and expert-driven to that which is demystified to be simple, available, accessible, inclusive and utilised by all.
- Individuals and communities from being disengaged to those who take responsibility and accountability for stewarding needs of the community in fostering a socially just & ecologically sensitive society.
- Better informed and smarter decision support capabilities for practitioners and communities in their social interventions that are sustainable and equitable.

COURSE OUTLINE:

- Individual agency and community engagement
- Design using Conscious Full Spectrum Response Model (CFSR) for fostering Agency
- Spatial visualisation and reasoning
- Cartography
- Redefining Participatory Rural Appraisal
- Geographical Information System for Empowerment, Results and Action (GEAR)
- Designing for sustainable output, outcomes and impacts

TRAINING MODULES /DETAILS

(agency and leadership praxis modules not included)

Integrated Geography/Critical and Neo Cartography

- Spatial Visualisation, Spatio-temporal visualisation, Spatio-temporal reasoning
- Introduction to Integrated Geography, Cartography – Critical and Neo Cartography
- Tools for Spatial Visualisation – Google Earth, Global Navigation Satellite Systems
- Understanding Maps, Reading maps, Reading Toposheets
- Manual Digitization
- Understanding Data

Geographical Information System

- Theory – History and Basics, Geographical Data
- Introducing GIS applications (Software) – **Qgis**, Map window, Arcgis (Commercial)
- Introduction to Quantum GIS (Qgis)
- Layers
- Georeferencing
- Digitization – Point, Line, Polygon
- Importing spatial data
- *Raster Operations/Analysis, Vector Operations/Analysis**
- Thematic mapping/Analysis
- Geospatial Querying/Analysis
- Output
- WebGis*



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Annexure I Case Studies

Case I - Use in Community

In the past, BBI has engaged with organisations and communities in Nagapattinam, Tamil Nadu through a learning-in-action programme, building on what they are able to do and what they have accomplished. The process integrates skill-based training and transformational leadership at the grassroots level which includes personal leadership, systems thinking and designing for results and impact. The process combines agency and praxis components, culminating the power of GIS mapping, citizen science and participatory methods, providing a flexible medium of practice, that simultaneously builds technical skills, fosters leadership by sourcing inner capacities and stimulates human enquiry, using simple yet sophisticated tools which translate to results and action on the ground. Mapping technologies include tools & techniques of Remote Sensing, Geographical Information System (GIS) and Positioning Systems like Global Positioning Systems (GPS) for both managing and preparing strategies for any intervention in the system in order to retain their rights over the resources.

As the tools are simplified in local language, NGOs and communities are able to learn and apply these tools for visually mapping and understanding resources and build community information systems and village development plans, while simultaneously developing strategies for action that shift systems and cultural norms based on universal values.

The tools and learning modules are being used by these NGOs to build capacities, empower local fisher communities, develop resource maps, create evidence for legal and public administrative processes and information for decision making, build resilience in disaster preparedness and design breakthrough initiatives towards meeting their larger goal of sustainability of livelihoods and environment along the coast. This provides an opportunity to not only solve problems that are local to them, but also stretch, in solidarity, to support and empower others in their network along the coast.

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Outputs from a Resource Mapping exercise facilitated at a coastal village in Cuddalore district, Tamil Nadu by our partner NGO, LAW Trust

Figure 1: Sketch map made using Participatory Rural Appraisal (PRA)

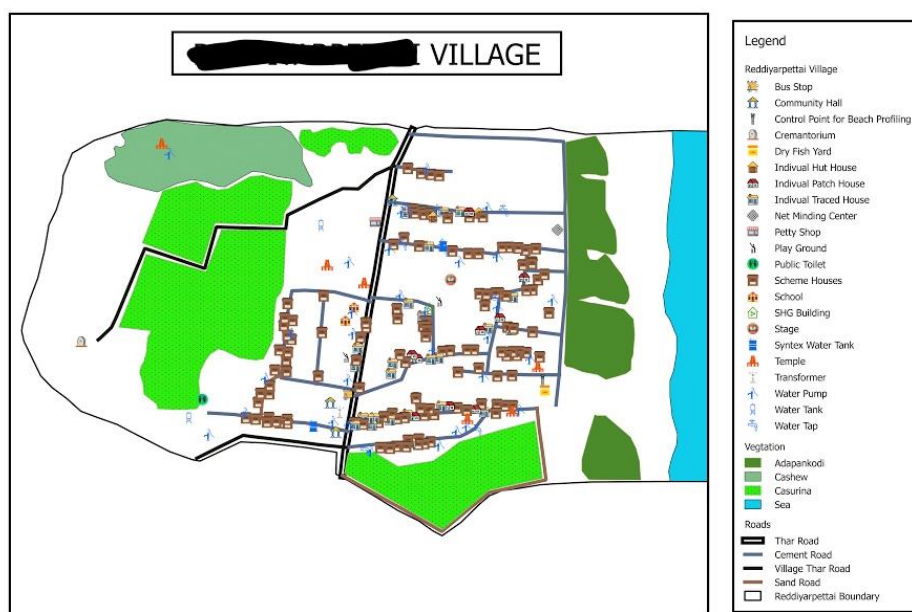
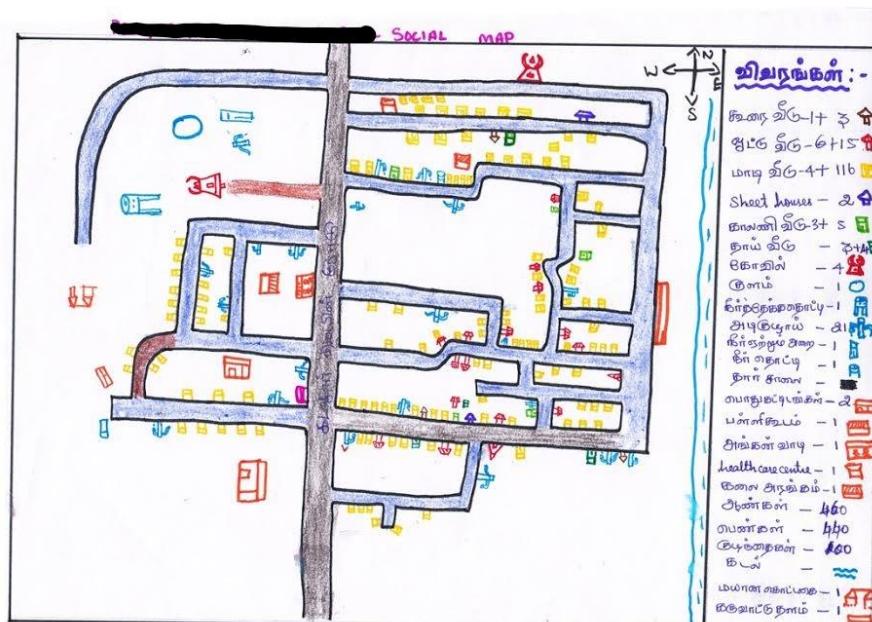


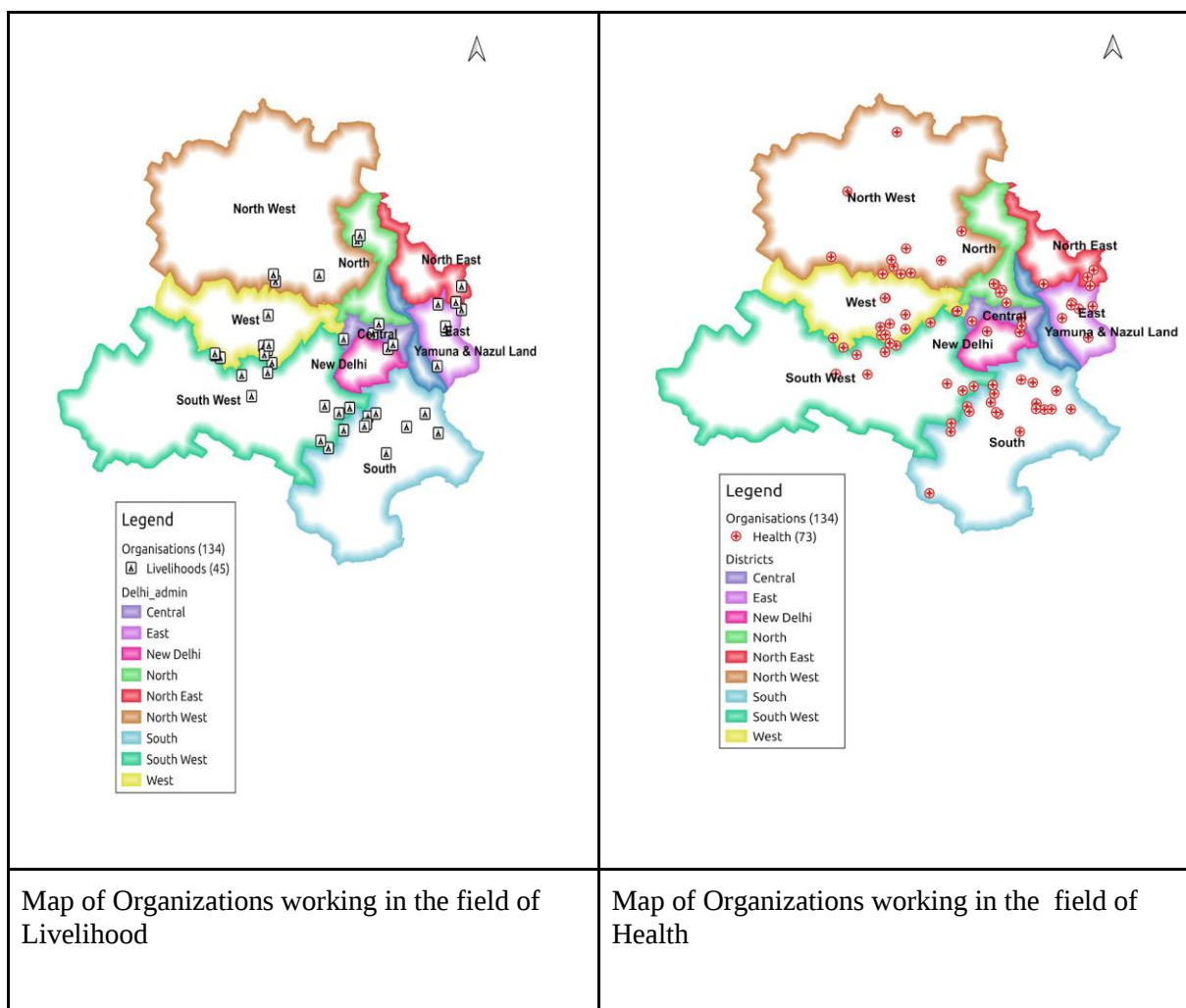
Figure 2: Resource map made on Quantum GIS

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Case II- Information @ One Click: Mapping resources, services and data related to disabilities

The project was conceived by two alumni of the BBI summer school, who were students of Social Work in Disability Studies and Action. After graduation, as professional social workers they used the CFSR model to design a proof of concept project with the Government of India. to make the information pertaining to services for people with disabilities available and accessible, through an online format, at just a click to obtain information with ease. The information included details of the services that are available for persons with disabilities to access, processes and procedures involved in availing these services, timeframe for the completion of the processes of the services and their geocoordinates.



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