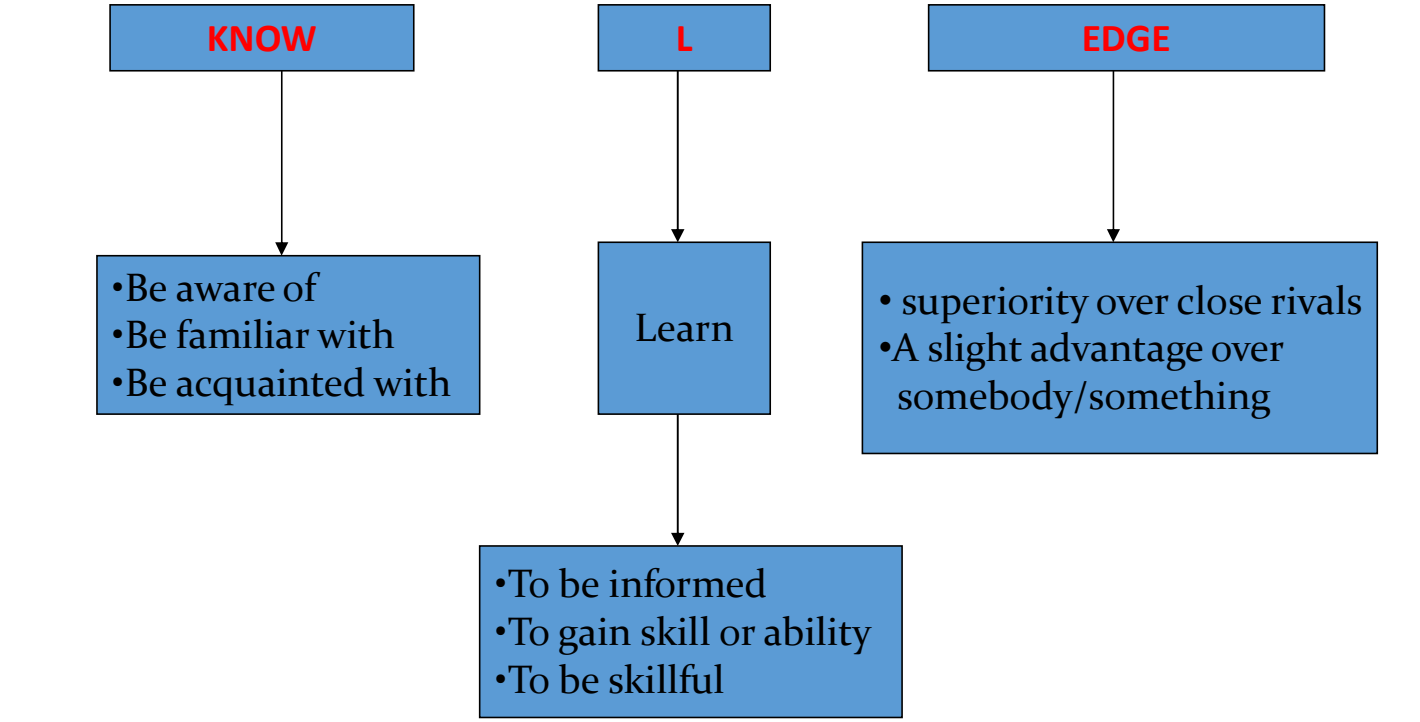
Knowledge Management in Climate Change

Dr P K Bhattacharya
Associate Director & ENVIS Coordinator, TERI

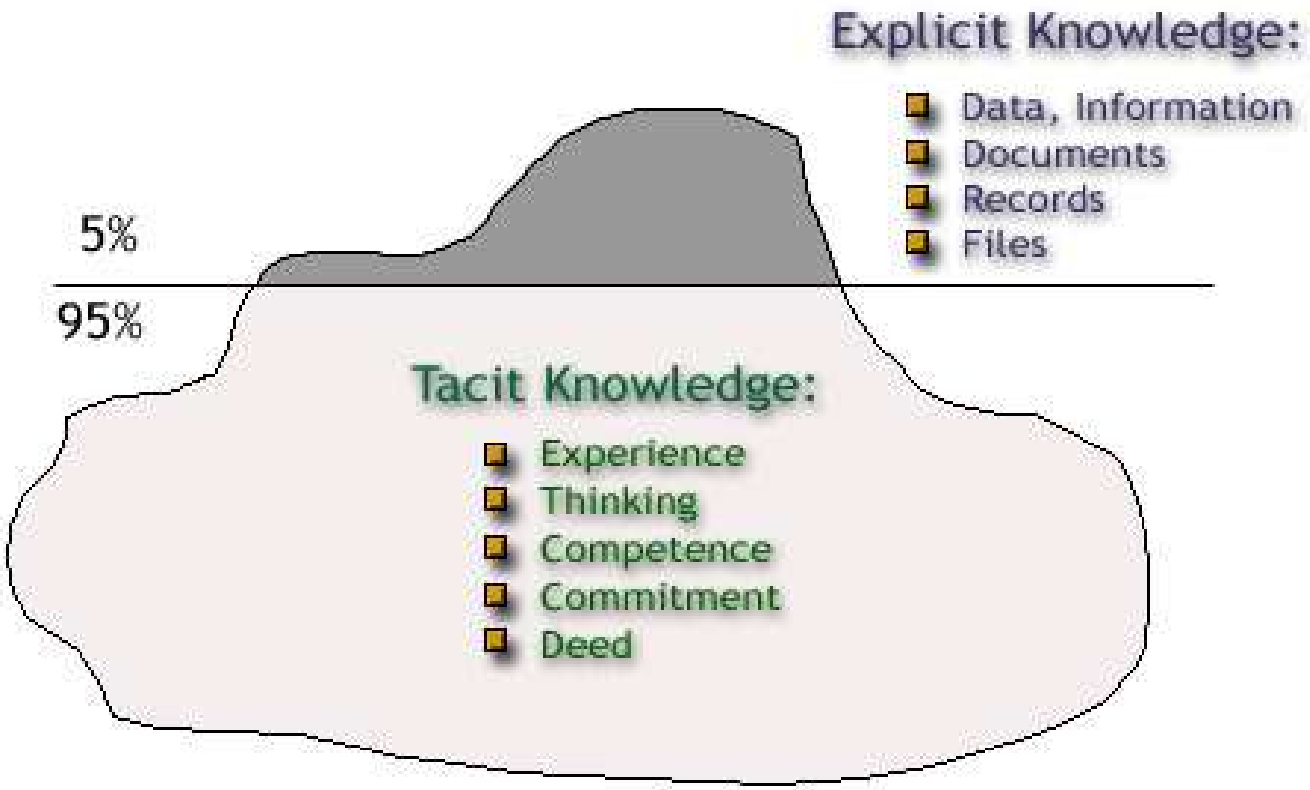
teri
Creating Innovative Solutions for a Sustainable Future

Decoding KNOW…L….EDGE



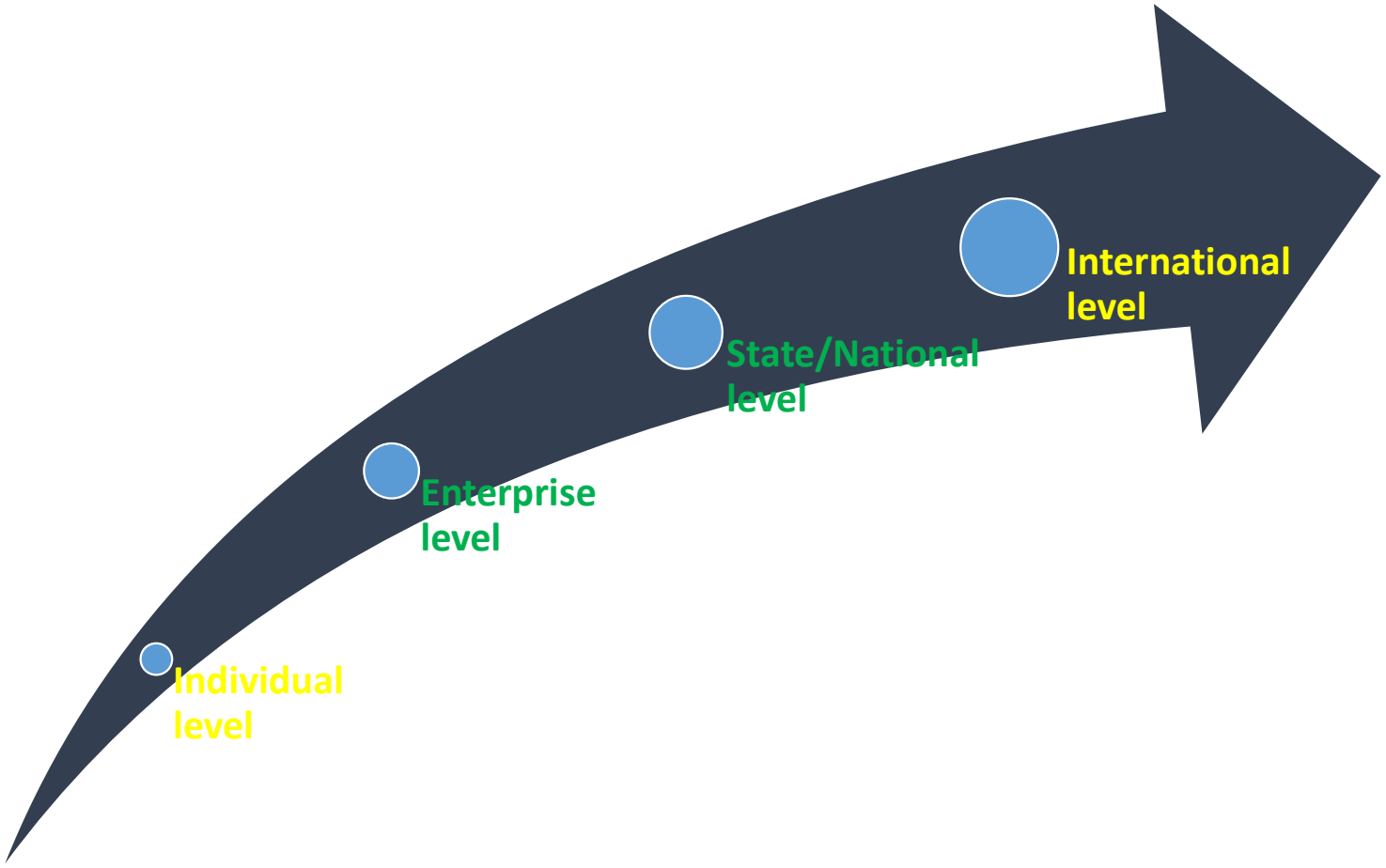
The term KNOWLEDGE in itself is a process of learning to know everything (information) through observation, experience and teaching in to have an edge over others

Knowledge Iceberg



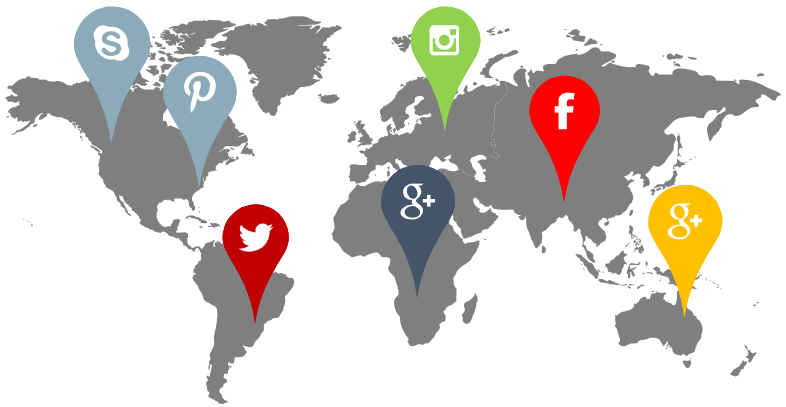
The "Iceberg" metaphor describes the relationship between Explicit & Tacit Knowledge

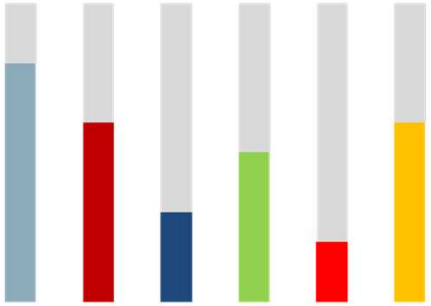
Knowledge Management Types



New “My KM.in “

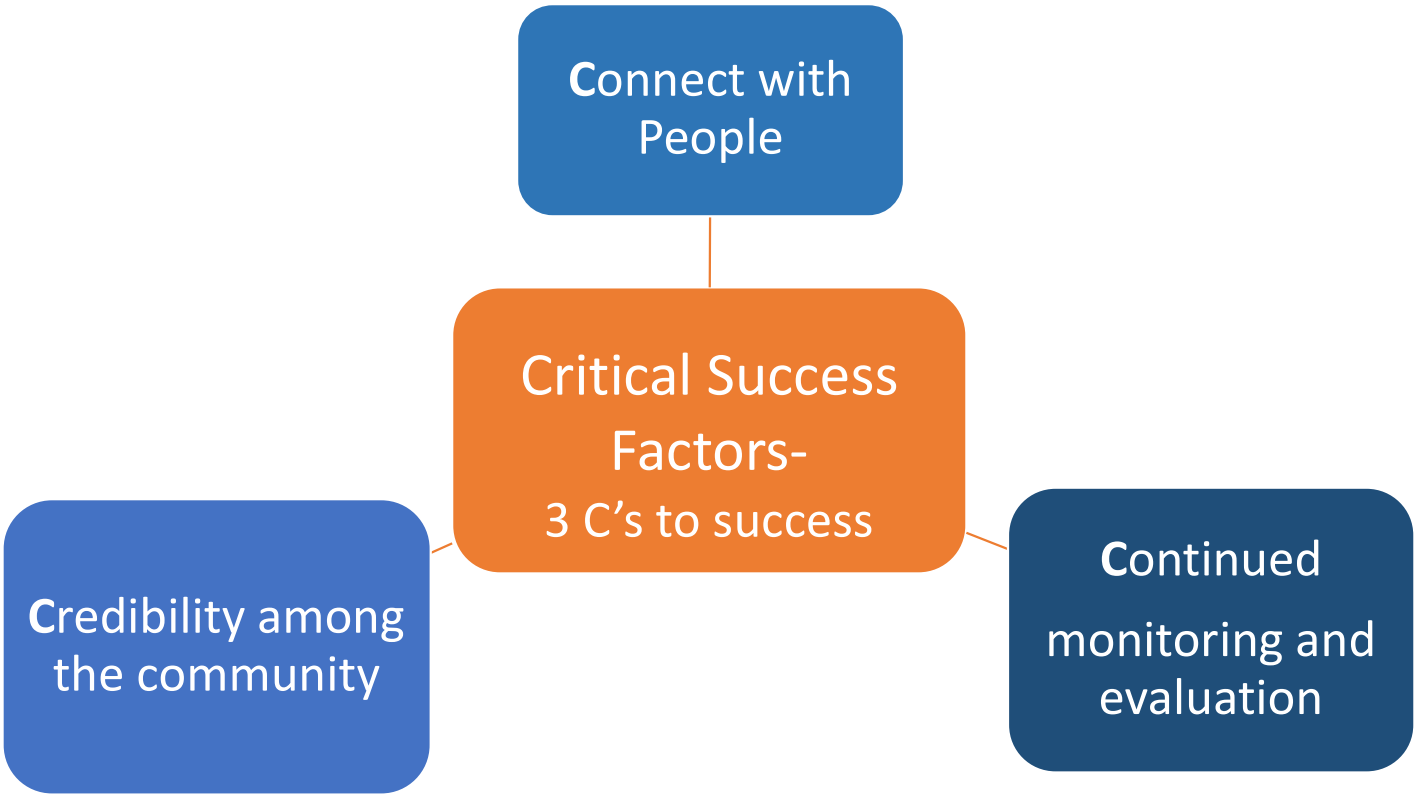
Integration with Social Media & Analytics





Connectivity and
Measurement Index.

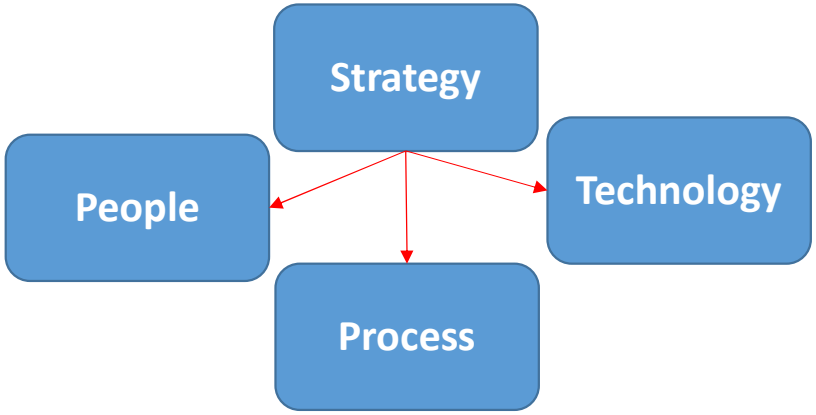
Critical Success Factors



Transformational KM Strategy

- **Which factors are crucial for research that can be addressed through KM?**
- **Which knowledge resource adds most value, and what investments are required to realize this value**
- **What are the highest priority initiatives**

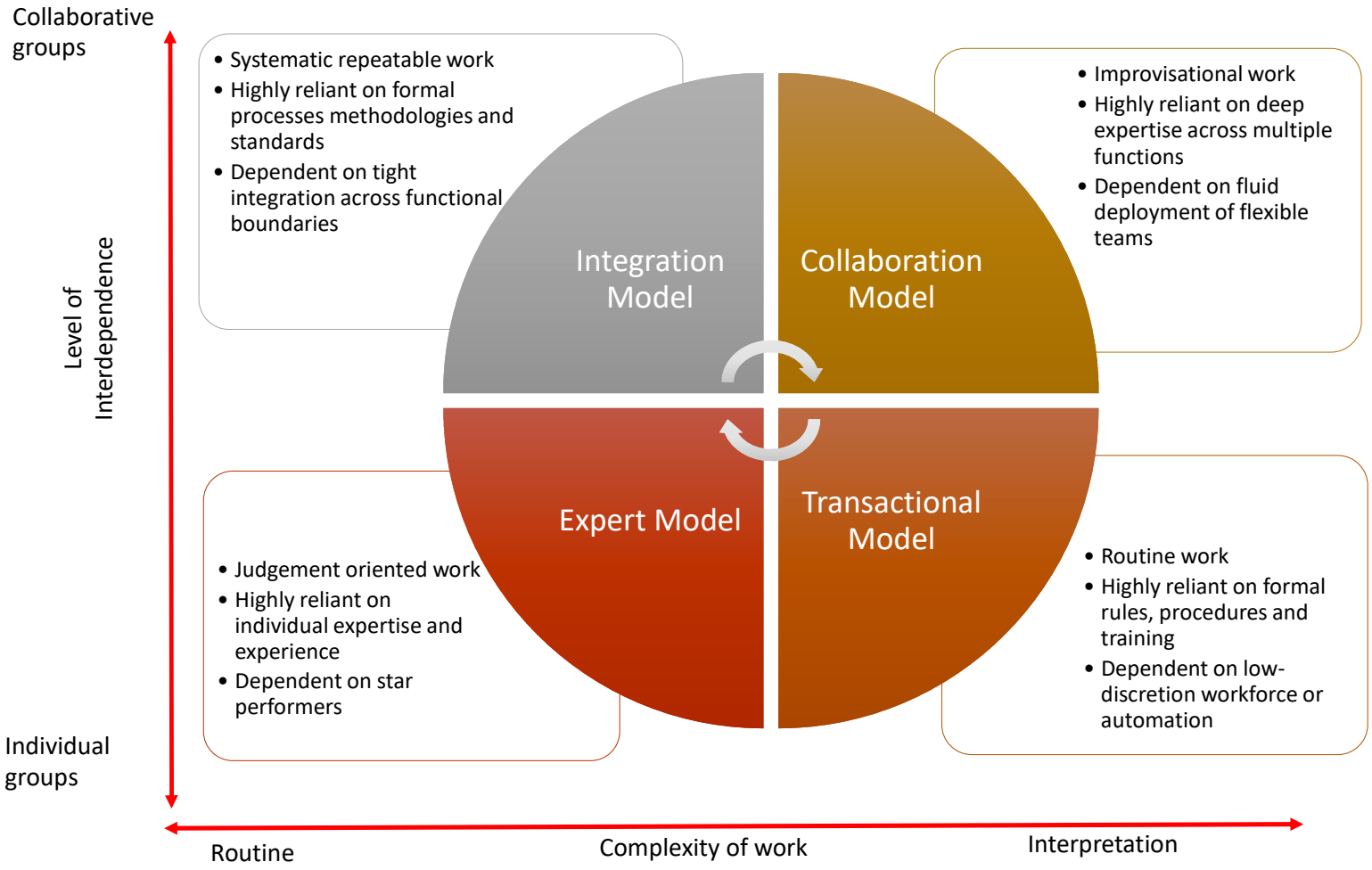
- **How do you create a culture**
- **Which people need to be empowered to contribute the right knowledge**
- **Are priorities aligned with measurement**



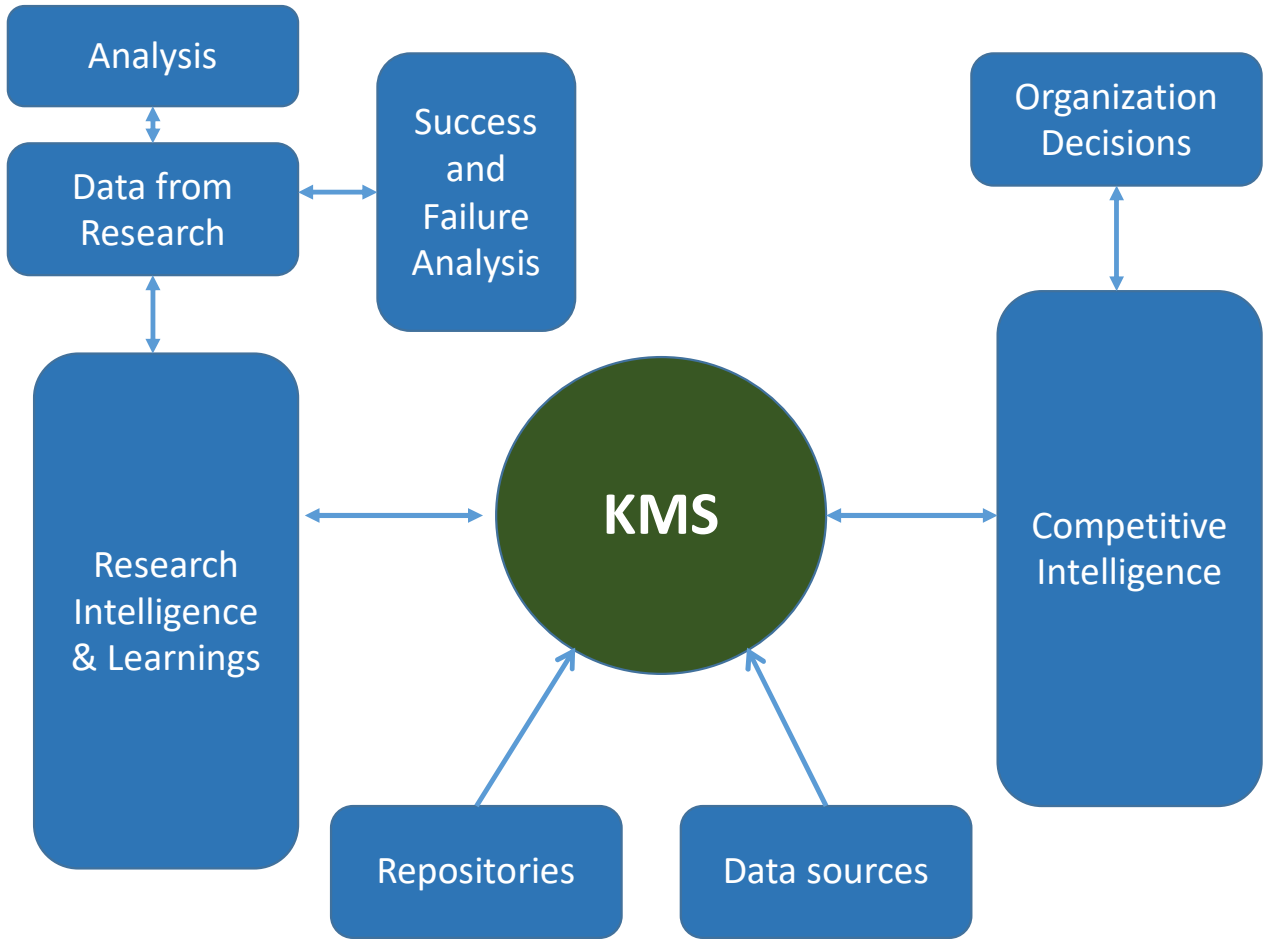
- **What tools are currently in place?**
- **What tools are needed to enable the environment**
- **How do you fill the gap**

- **Area the right processes in place to:**
  - **Capture, refine and create knowledge**
  - **Disseminate, share and apply knowledge to deliver research/business value**

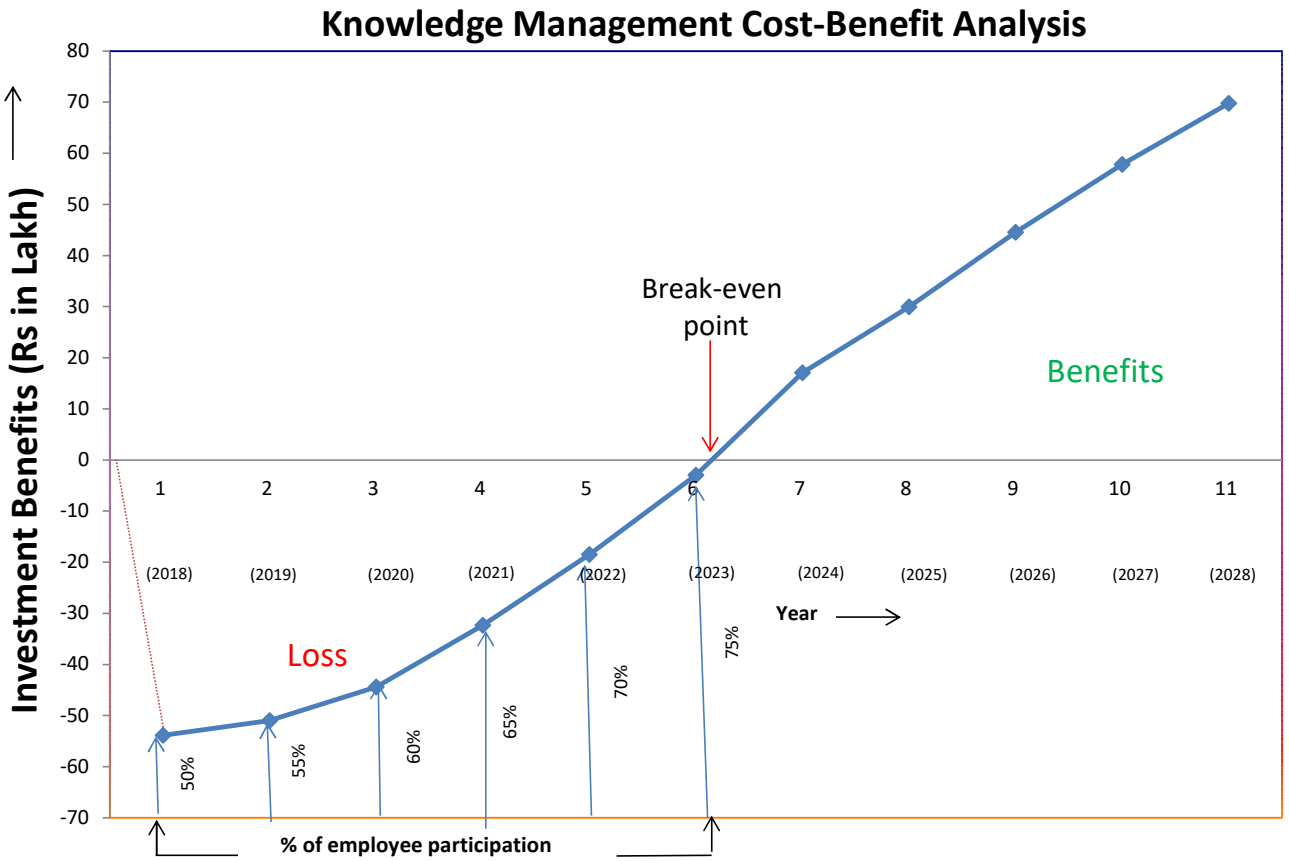
Knowledge Management Framework: Work Models



Sustainable Competitive Advantage

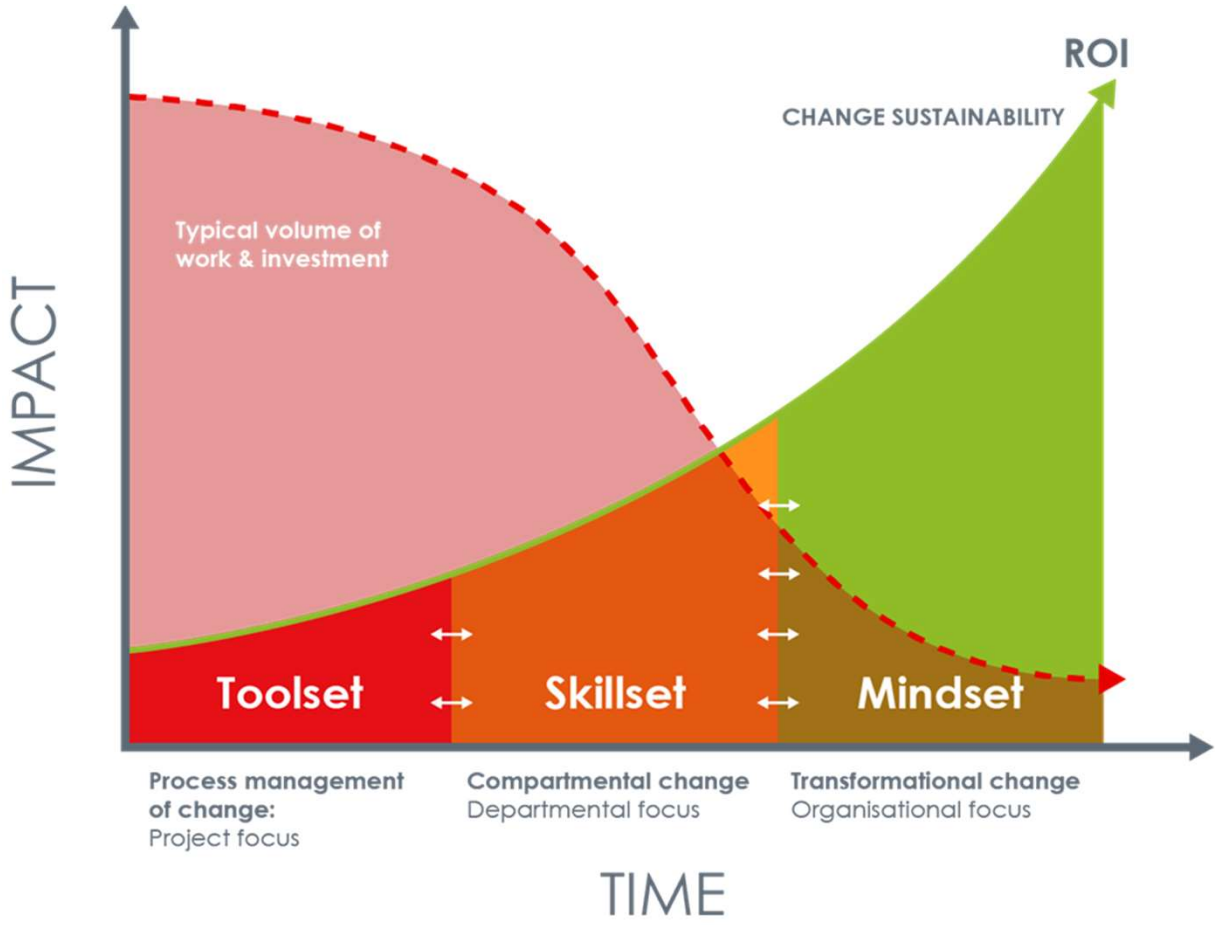


Knowledge Management RoI Benefits



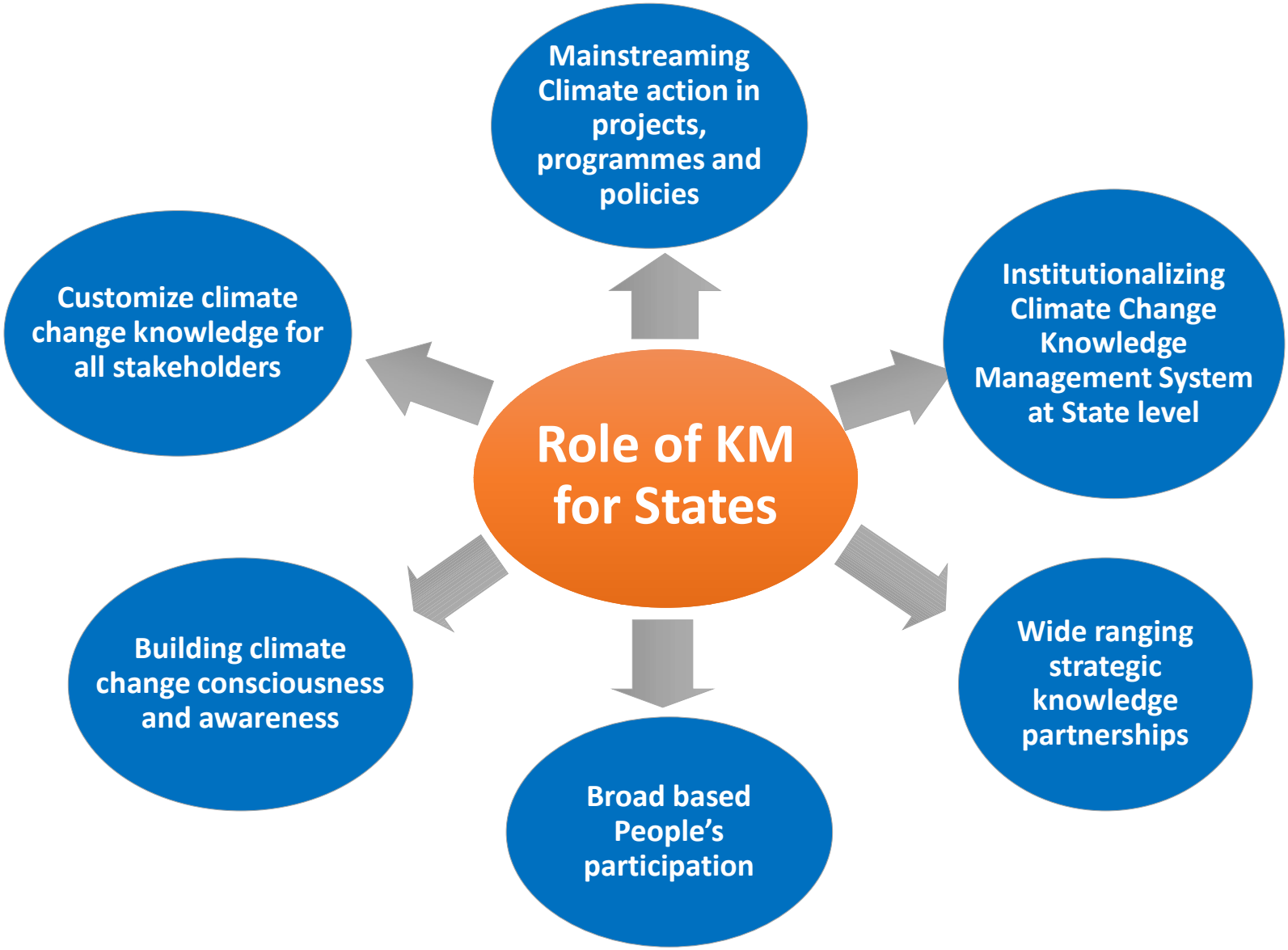
- All knowledge items available for consultation as required
- Organization memory retained
- Work duplication minimized
- Saves time for productive work
- Collaborative work possible
- Knowledge driven value added services creation are possible through derived competitive advantages
- Evidence based decision making leads to error minimization at community level

Knowledge Management Strategy
(Impact Measurement)



Value of Knowledge Management in Climate Change

- Knowledge Management facilitates climate change best practices and examines barriers to use of knowledge for climate change mitigation, adaptation and disaster risk reduction
- Immediate benefits:
  - Knowledge professionals and researchers to improve practices and come together as a community to solve a local/global issue
  - Data scientists to leverage KM and artificial intelligence (AI) technologies to build and analyze large datasets to support climate action
  - Donors, to contribute towards significant societal benefits made possible through better KM driven assessment and its contribution towards more informed decision-making


Role of KM for States
Mainstreaming Climate action in projects, programmes and policies
Institutionalizing Climate Change Knowledge Management System at State level
Wide ranging strategic knowledge partnerships
Broad based People's participation
Building climate change consciousness and awareness
Customize climate change knowledge for all stakeholders

Key Activities of Climate Change KM

- Education and Training
- Resource Development
- Networks and Strategic Partnerships
- Engaging Communities
- Knowledge Portal
- Communication and Outreach

Education and Training

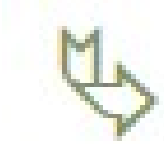
Low levels of awareness and limited understanding of climate change issues is an impediment for implementing adaptation measures

- Organize and capture proceedings of technical sessions, workshops, dialogues on Climate Change
- Develop education and training resource material

Target Group: Research professionals, Policy makers, Communities, Children and Youth

Purpose

- Build capacity of all interested stakeholders and encourage public participation for devising adequate response measures for Climate Change
- Open lines of communication and build trust and ownership for the climate change activities



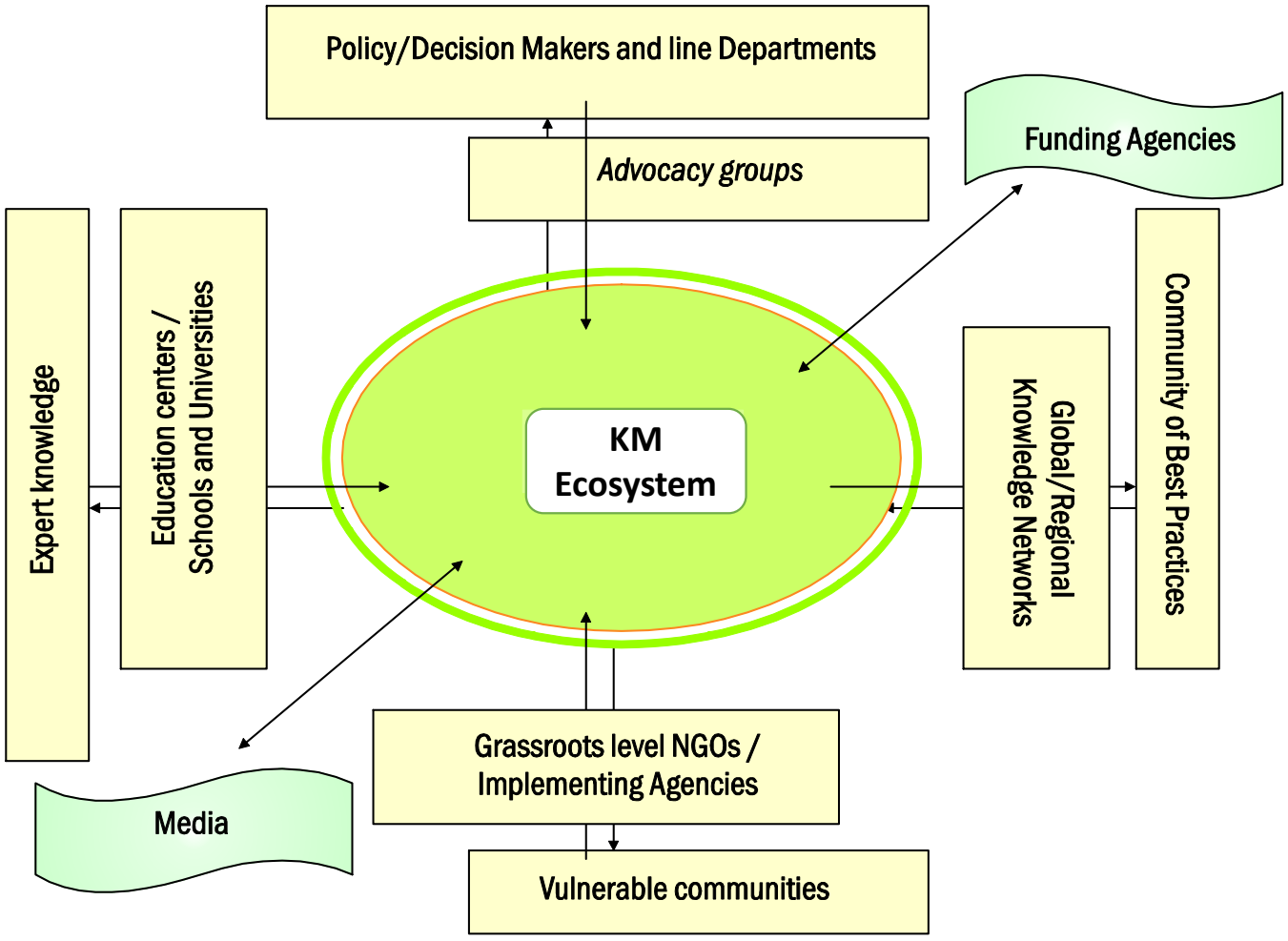
Knowledge Resource Development

Inadequacy of information may lead to declining stakeholder interest, and may not be possible to generate all the resources at a single source

- Employing innovative ways to engage various sources of knowledge by
  - collaborating with different partner organizations and stakeholders in sourcing and generating new knowledge catering to user needs
  - motivating, facilitating and coordinating newer research relevant to the State
- KM should ensure **Quality**; **Quantity**; **Reliability** and **Accuracy** of the knowledge resources

- Collecting research studies and scientific assessments including: *Research studies to develop climate scenarios for the State*
- Compilation of latest scientific studies and reports on Climate Change
- Climate Change Policies and latest developments
- Inventory of experts and organizations who are working in different areas/ themes
- Information about best practices and FAQs
- Policy briefs specific to the State
- Audio/Video clips on climate change

Networks and Strategic Partnerships in State



.....Networks and strategic partnerships

Scope of KM work

- Identify knowledge needs and gaps
- Stakeholder mapping
- Inventory of good practices

Building Networks

- Inventory of relevant forums/knowledge networks with a brief description of their topical focus
- Networks could be theme specific engaging policy makers, scientists and members from the civil society or specific to user groups e.g network of Children and Youth
- Networks will be facilitated by a moderator

Clear rules and guidelines

- Clear roles and terms of engagement
- Identification of common rules and mechanisms for knowledge sharing and transfer
- Clear guidelines for conflict resolution and an exit strategy

Incentives

- Identify local champions who will recognized and awarded
- The incentives can be financial awards or non-financial which are reputational in nature
- Credit based incentive structure

Climate Change KM in Practice: TERI Cases

Role of TERI ENVIS Resource Partner

Established in 1984 under ENVIS Programme of MoEFCC, Government of India

- **Location:** Knowledge Resource Centre, TERI, New Delhi
- **Operational:** since July 1984
- **Expertise areas:** Renewable Energy and Climate Change
- **Mode of activities:** Research, Surveys, and Trainings/Workshops, GSDP, NES
- **Major features:** GSDP, Research outputs in Renewable energy, Sustainable development, climate change, Online databases
- **Contact us:** www.terienvis.nic.in

- Conducting Green skill Development
- Contributing to National Environment Survey
- Engaged in Community-driven Environmentally Sustainable Village Programme
- Identifying & bridging knowledge gap on RE & climate change research
- Information dissemination through communication tools to support Research and Policy

Major Components

- **Case Studies**
- **Technologies**
- **Statistics**
- **GSDP**
- **Databases**
  - ✓**R & D Organization**
  - ✓**Article**
  - ✓**Experts**
  - ✓**Ph.D Thesis**
  - ✓**Environment& Climate Change Abstracts**

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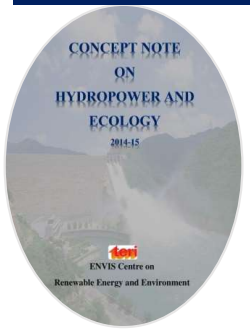
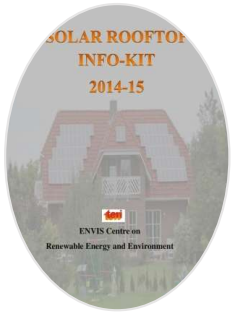
Our Knowledge Products

Upgrowth Analysis of Biofuels

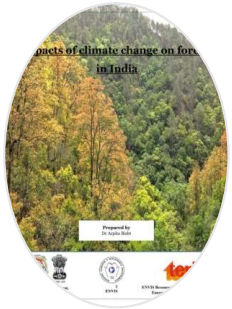


Hydropower Info-KIt

Biofuels Info-KIt



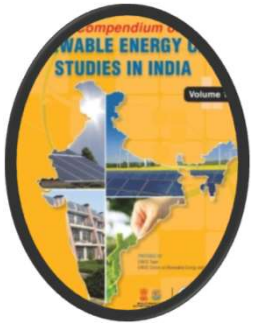
Solar Rooftop Info-Kit



Impacts of climate change on forests in India

Unravelling waste-to-energy Energy Info-Kit

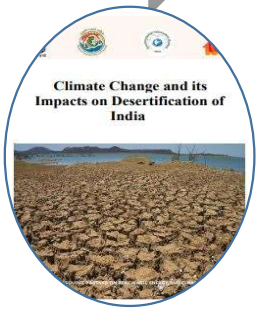
Value Added products



Compendium of Renewable Energy Case Studies

Waste-To-Energy Info-Kit

Smart Cities Report



Climate Change and its impacts on Desertification of India

eNREE Newsletter

Value Added products

Publications

Green Skill Development Programme (GSDP)

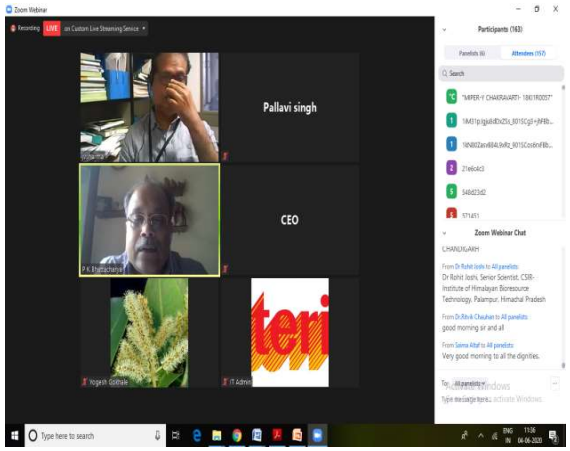
Sustain and Enhance Technical Knowledge in Solar Energy Systems

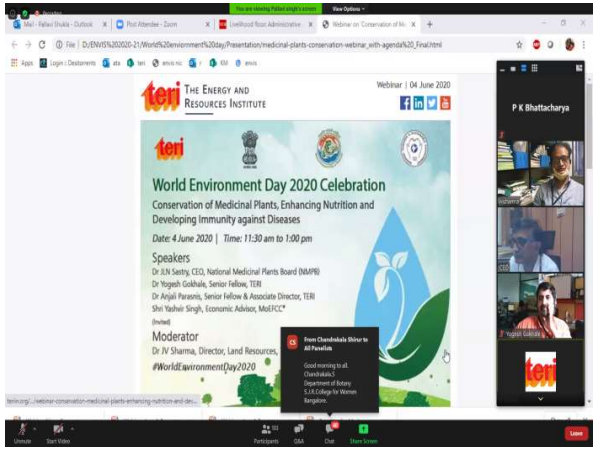
- 18 GSDP trainings conducted in different parts of India
- 7 Ongoing GSDP trainings
- Trained over 780 students; 50% students are earning livelihood

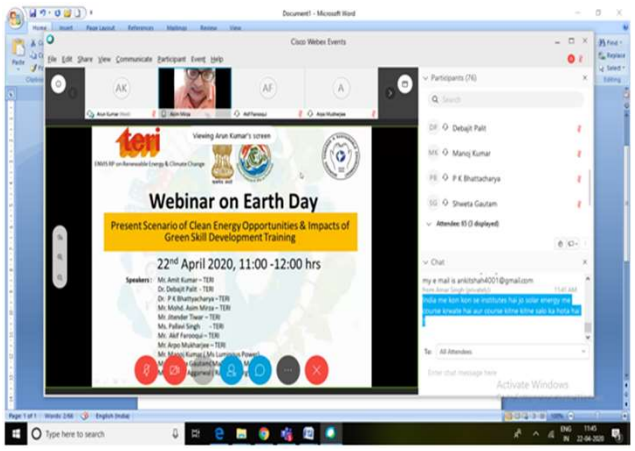
Field Exposure Visits

Solar Installation

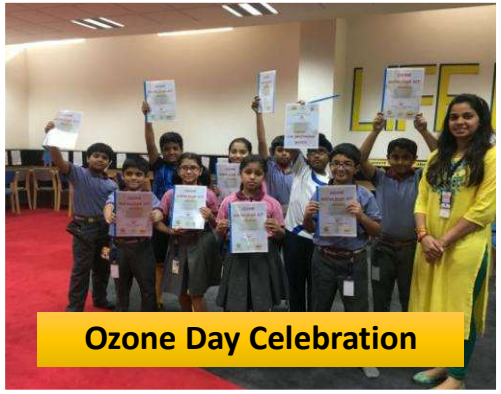
Recent Webinars





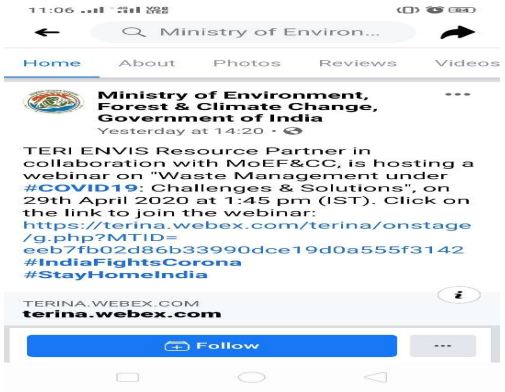


Stakeholder's outreach



Promotion & Outreach

- Promotion of ENVIS through webinars, annual seminar in different parts of India
- GSDP programmes & livelihood generation at different parts of India
- Success Stories of GSDP trainees in MoEFCC Portal
- Promotion of Webinar through MoEFCC twitter handle



- Aggressive promotion through local & online media, community level awareness generation, e-mails of publications, social media campaign etc
- Promotion through online & offline brochures, posters, leaflets

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Climate Change theme

New Arrivals

Books

» The global health cost of PM2.5 air pollution: a case for action beyond 2021
World Bank
World Bank; Washington, DC

» Emergency food security assessment: Tigray Region, Ethiopia
World Food Programme
World Food Programme; Rome

» Are cities in Southern India breathing safe air?: an air quality analysis of 10 cities from South India
Akanksha., Chanchal, Avinash Kumar
Greenpeace India; Bengaluru

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Journals

» Carbon Finance

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CDs

» Climate change resource kit: R
Biodiversity Programme, Asia

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News

» Heatwave: Crop losses to be large; wheat and vegetables hit the most
The Financial Express, 2 May 2022

» OIL signs MoU for Carbon sequestration and restoration of degraded forest land in Digboi
Press Information Bureau, 30 April 2022

» Climate change may increase risk of new infections
The Hindu, 30 April 2022

» Weather stations to be set up at 250 Kerala schools
The New Indian Express, 8 April 2022

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Events

» Climate Week 2022: World Conference on Climate Change & Sustainability
Virtual
22-25 August 2022

» 22nd Meeting of the Contracting Parties to the Barcelona Convention and its Protocols
Antalya, Turkey
07-10 December 2021

» UN Climate Change Conference of the Parties (COP26)
Glasgow, UK
31 October 2021 - 13 November 2021

» Tackling the food waste funding gap: financing food waste prevention to combat climate change
Webinar
07 October 2021

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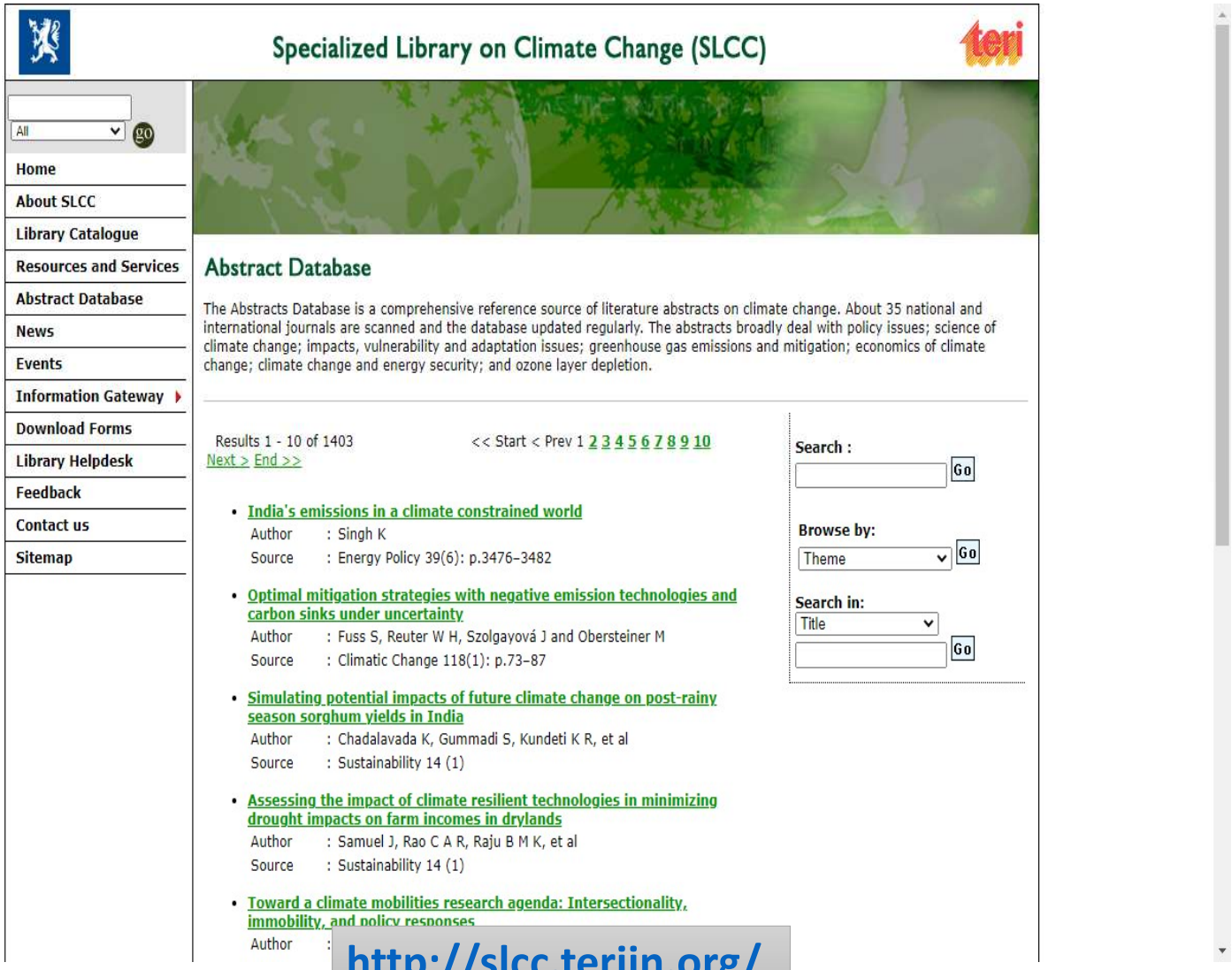
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Abstract Database
The Abstracts Database is a comprehensive reference source of literature abstracts on climate change. About 35 national and international journals are scanned and the database updated regularly. The abstracts broadly deal with policy issues; science of climate change; impacts, vulnerability and adaptation issues; greenhouse gas emissions and mitigation; economics of climate change; climate change and energy security; and ozone layer depletion.
Results 1 - 10 of 1403
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India's emissions in a climate constrained world
Author : Singh K
Source : Energy Policy 39(6): p.3476–3482
Optimal mitigation strategies with negative emission technologies and carbon sinks under uncertainty
Author : Fuss S, Reuter W H, Szolgayová J and Obersteiner M
Source : Climatic Change 118(1): p.73–87
Simulating potential impacts of future climate change on post-rainy season sorghum yields in India
Author : Chadalavada K, Gummadi S, Kundeti K R, et al
Source : Sustainability 14 (1)
Assessing the impact of climate resilient technologies in minimizing drought impacts on farm incomes in drylands
Author : Samuel J, Rao C A R, Raju B M K, et al
Source : Sustainability 14 (1)
Toward a climate mobilities research agenda: Intersectionality, immobility, and policy responses
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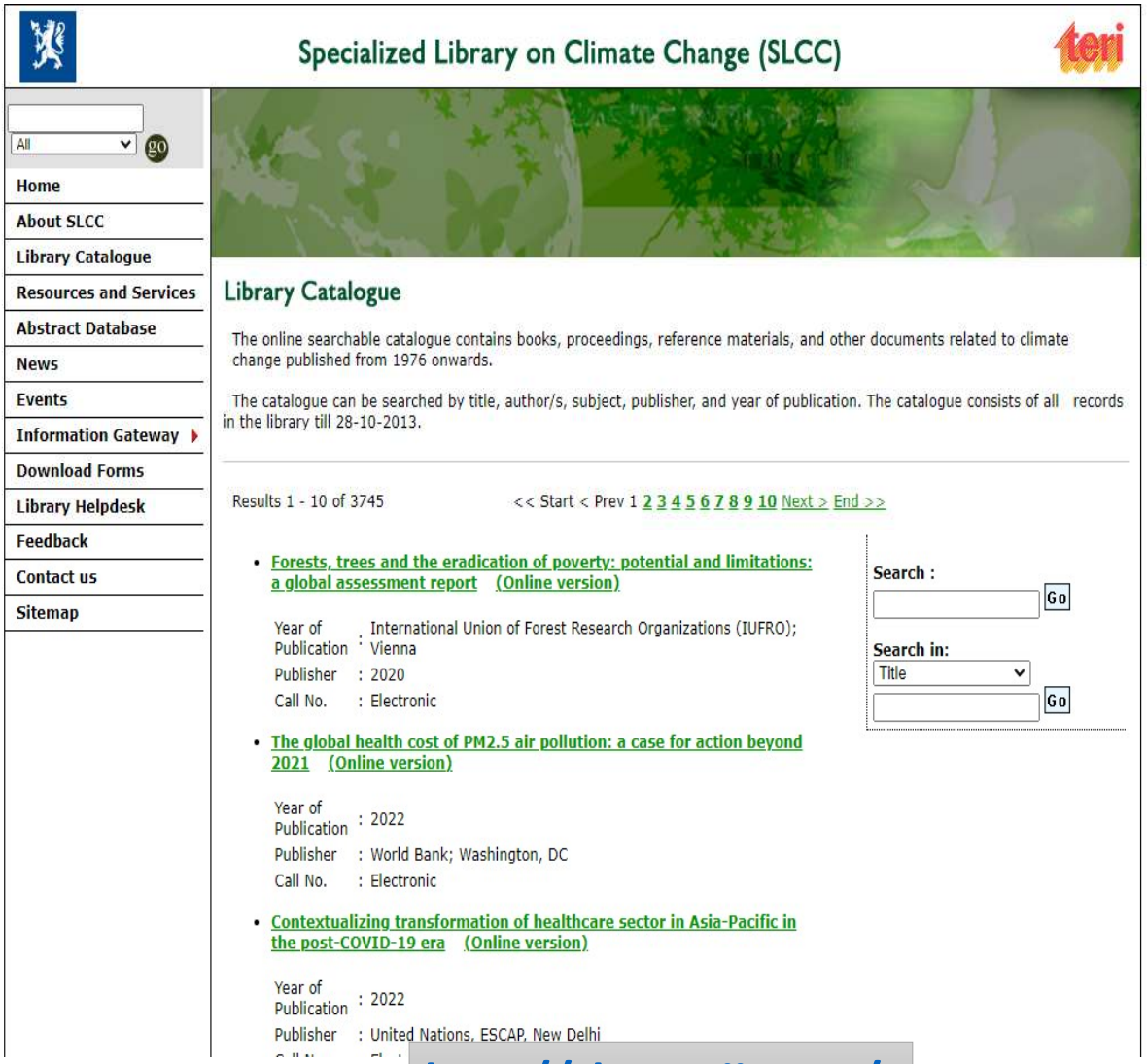

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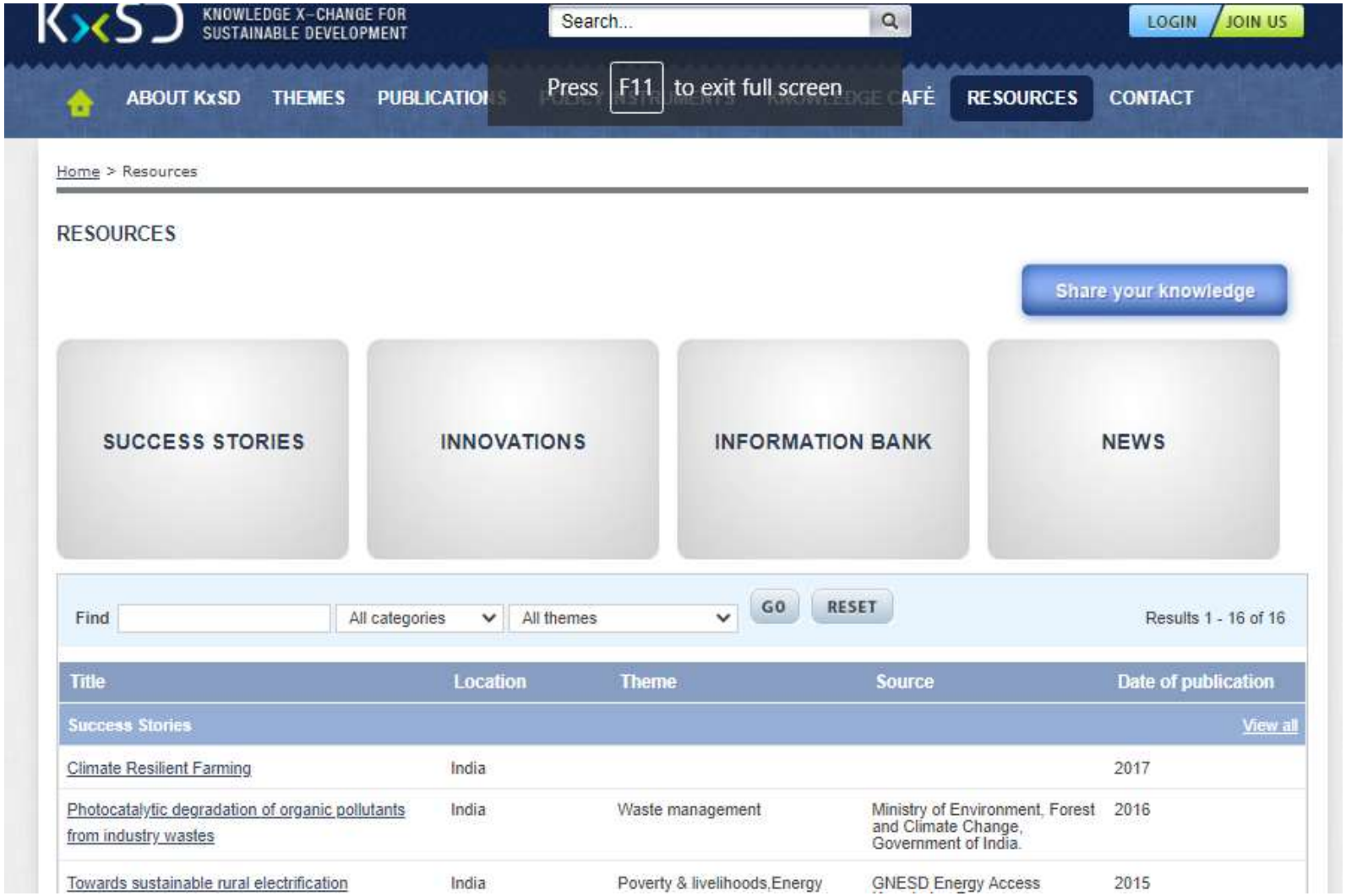
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2017
Photocatalytic degradation of organic pollutants from industry wastes
India
Waste management
Ministry of Environment, Forest and Climate Change, Government of India.
2016
Towards sustainable rural electrification
India
Poverty & livelihoods,Energy
GNESD Energy Access
2015

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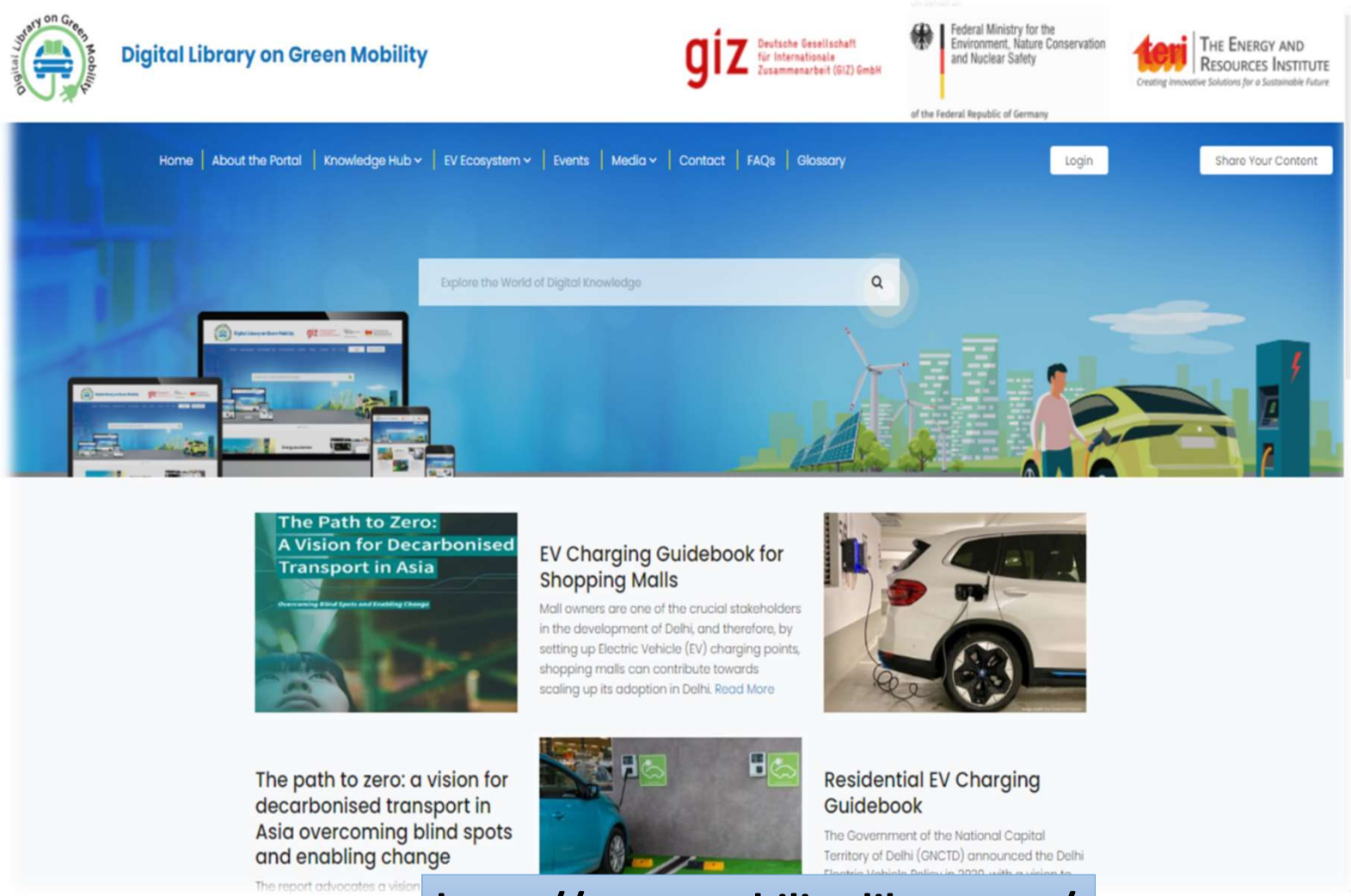

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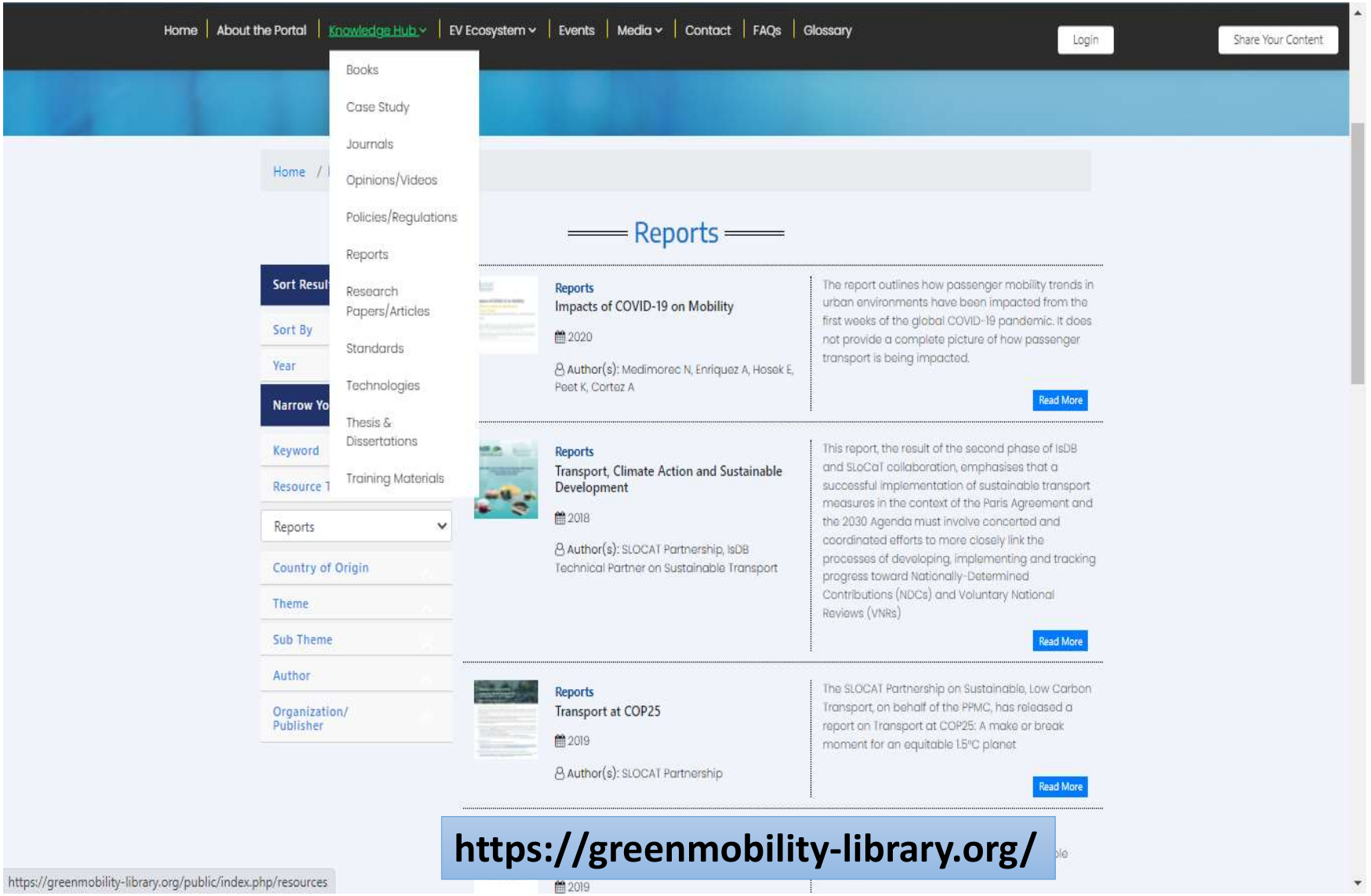
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Sort Result
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Year
Narrow Yo
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Resource T
Reports
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Theme
Sub Theme
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Organization/ Publisher
Reports
Impacts of COVID-19 on Mobility
2020
Author(s): Medimorec N, Enriquez A, Hosek E, Peet K, Cortez A
The report outlines how passenger mobility trends in urban environments have been impacted from the first weeks of the global COVID-19 pandemic. It does not provide a complete picture of how passenger transport is being impacted.
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Reports
Transport, Climate Action and Sustainable Development
2018
Author(s): SLOCAT Partnership, IsDB Technical Partner on Sustainable Transport
This report, the result of the second phase of IsDB and SLoCaT collaboration, emphasises that a successful implementation of sustainable transport measures in the context of the Paris Agreement and the 2030 Agenda must involve concerted and coordinated efforts to more closely link the processes of developing, implementing and tracking progress toward Nationally-Determined Contributions (NDCs) and Voluntary National Reviews (VNRs)
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Reports
Transport at COP25
2019
Author(s): SLOCAT Partnership
The SLOCAT Partnership on Sustainable, Low Carbon Transport, on behalf of the PPMC, has released a report on Transport at COP25: A make or break moment for an equitable 1.5°C planet
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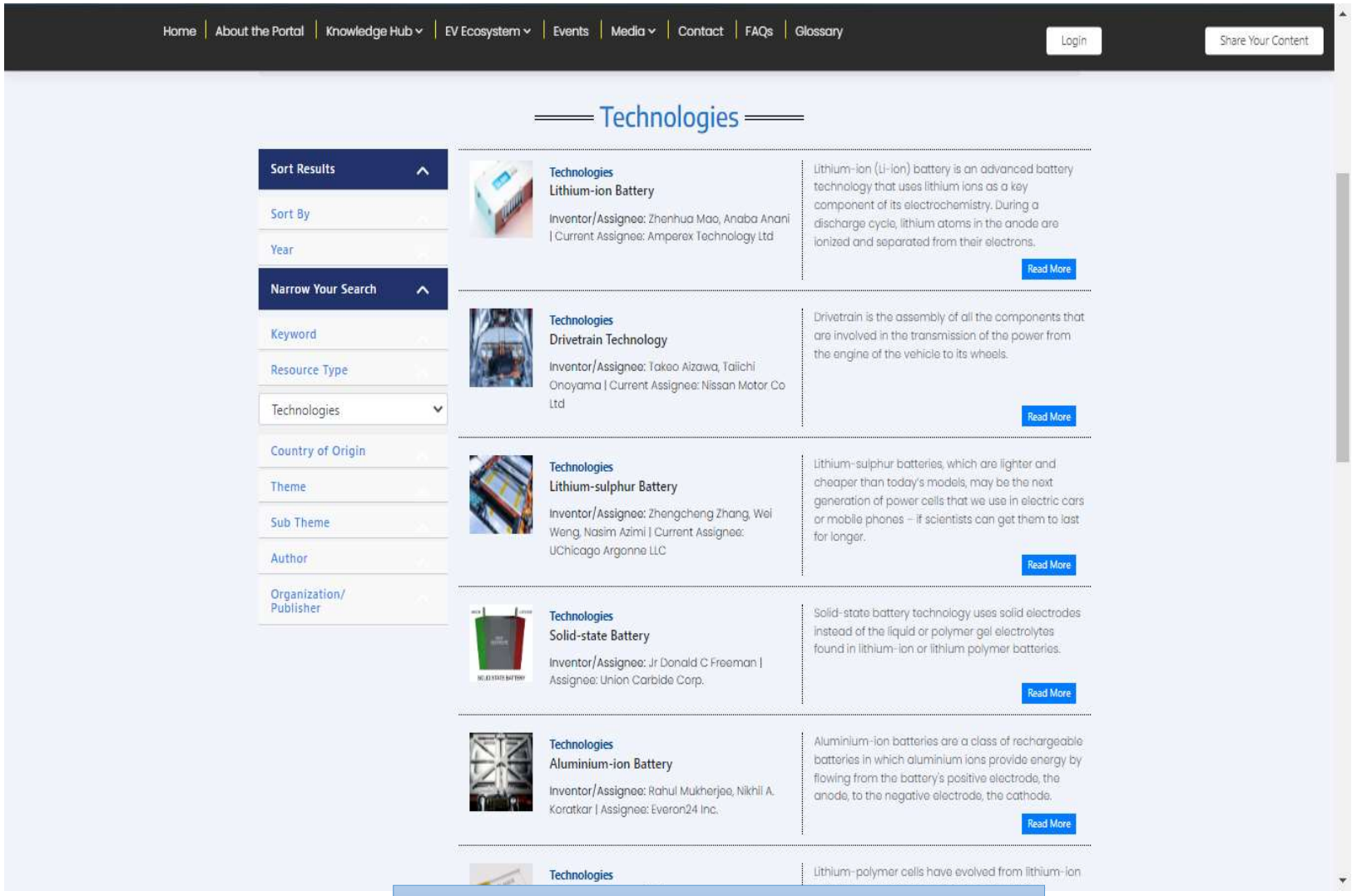

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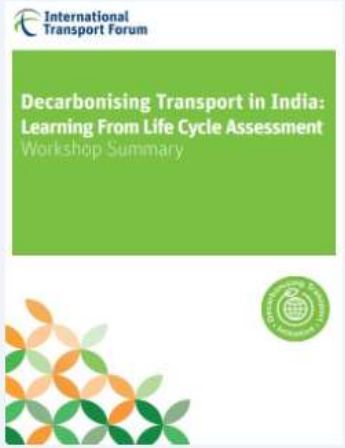

Decarbonising Transport in India: Learning from Life Cycle Assessment

Workshop Summary

Publication Year: 2021

Author(s): International Transport Forum (ITF)

Abstract:

This publication presents a summary of the workshop "Life cycle assessment methods to support India's efforts to decarbonise transport" organised by the International Transport Forum and the National Institute for Transforming India (NITI Aayog) in April 2021. Seventy-seven international and Indian experts took stock of existing work on assessing life-cycle emissions in transport and explored how current knowledge can support India's policies to decarbonize transport. The workshop also identified policy priorities and potential regulatory gaps arising from new vehicle technologies, fuel types and mobility services entering the mass market.

Country: India

Publisher/Organisation: International Transport Forum (ITF)

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