Guidance on how to **apply LEWIE** (local economy wide impact evaluation) to **assess economic impact** of protected area tourism on the local economy

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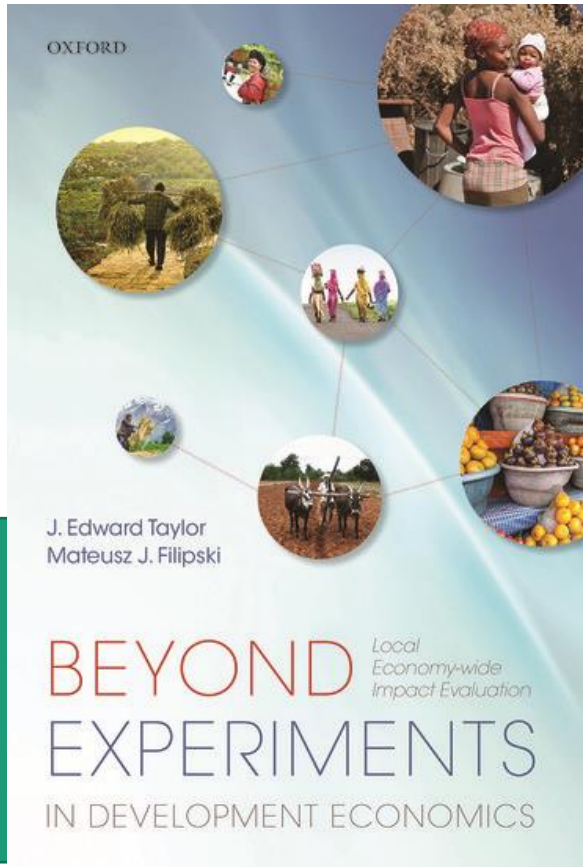
What is LEWIE?

The Local Economy Wide Impact Evaluation (LEWIE) methodology is used to measure the full economic impact of a cash infusion on the local economy by creating a snapshot of economic transactions triggered by the additional spending using micro-survey data from the economics agents (such as households, businesses, tourists, governments, others) located within the local economy



See detailed note on LEWIE

When to use LEWIE?

When you want to-

- Understand how the local economy works
- Inform and evaluate a project's design and impact, especially when randomized control trials (RCTs) are not possible
- Assess the economic impact (changes in household income, impact on local GDP, income multipliers, number of jobs, etc.) of an activity (cash transfer, a tourist visiting a national park, etc.) that injects money into a local economy within a project
- Evaluate the impacts of policy and market shocks in local economies- including on those who are not directly affected by these shocks

LEWIE was applied in global study - Banking Protected Areas (P171044)

Background on the study- Banking on Protected Areas (P171044)

Protected areas are good for conservation

Governments are looking to expand protected area (PA) coverage to conserve biodiversity, however, there is a perception that funding PAs is only good for conservation

but they also support development

Study to demonstrate that investing in protected areas can be good for conservation but also for development as **tourism in protected areas creates jobs, support community livelihoods and enables economic growth**

Approach to Study

Four country case studies were undertaken: two in terrestrial protected areas in Zambia and Nepal, and two in marine protected areas in Fiji and Brazil

LEWIE was applied to show the total economic impact (direct + indirect) of protected area tourism on the local economy

Objectives of the Study

- To make the economic case for public investments in protected areas
- To assess the incentives of communities to support conservation and strengthen linkages that increase benefits to communities
- To assess the impact of COVID-19 and potential for green recovery

Examples of questions that can be explored…

1. **What is the impact of an additional tourist on local GDP, production, and employment in and around protected areas?**
   - Including the impact on the tourism activities and the spillovers on other businesses and households around the PA
2. **What is the economic return per dollar invested by the government in the selected protected area?**
3. **How do restrictions on activities within and around parks affect local incomes**?
   - Costs of human-wildlife conflicts and restricting fishing and hunting.
4. **How might the government increase the local economic benefits from protected areas?**
   - Including hiring park rangers locally and enabling tourism businesses and households to source locally

Snapshot of the Study Process

1. Select your team
Select partners locally that can help technically and logistically

2. Secure Funding
Leverage funding sources early on

3. Launch the study
Through a stakeholder consultation process

4. Organize Data Collection
Conducting surveys takes at least three weeks per site

5. Do Field work
Training, local capacity building, and implementation

6. Do Analysis
Data analysis and econometric modelling

7. Prepare Outputs and Disseminate Results

1. Select the Team

Purpose: to find local partners who can help with logistics, support the project technically and find enumerators who can do the data collection

Team members[1] should include partners that can help with:

(1) **Enumeration:** Students from a local university who can conduct data collection. The professor in the university can help promote the opportunity through flyers, via email and help select enthusiastic students.

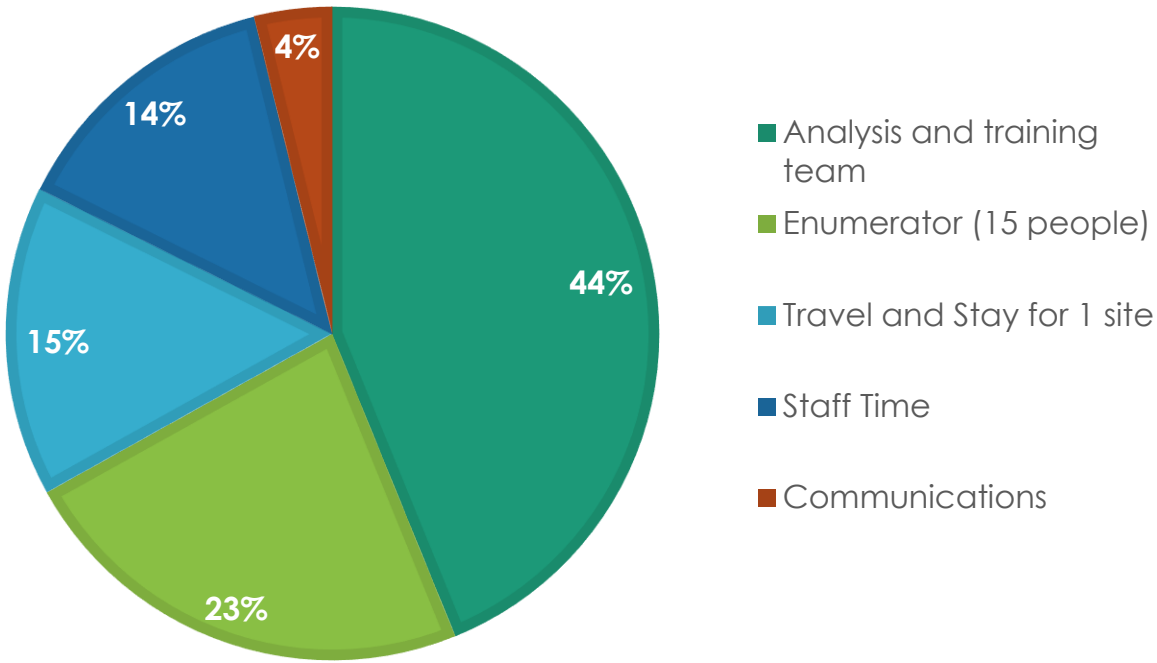
(2) **Logistics Support**: Local NGOs and/ or local vendors who can arrange accommodation and travel support

(3) **Technical Support**: NGOs, academics, government to help navigate the research permits, define scope, provide data for the study, support analysis, provide feedback, etc.

[1]For World Bank teams – consider engaging other Global Practices (agriculture, IFC, FCI, etc.) to help think through components along the entire tourism value chain

2. Secure Funding

- The study cost approximately US$130 K per protected area



Note: The analysis and training team includes the team that has created the LEWIE methodology, and includes one professor, three post-docs, and two masters' students.

3. Launch the study

Prior to the study, it is important to conduct consultation to ensure that the study can meet the goals of stakeholders who will benefit from the research findings.

1. **Purpose of consultation:** to get buy-in from relevant stakeholders for implementing the study
2. **Target groups/ stakeholders:** PA Authorities, Ministry of Tourism, Wildlife and PAs, NGOs, Private Sector, Tourism operators, etc.
3. **Consultation should include** determining the site and what constitutes the local economy, discussing the scope of the study, and any administrative requirements for the fieldwork (such as research permits)

3. Launch the study

SITE SELECTION

Site selection depends upon the number of sites that are needed for the efficacy of the study and the available budget.

Criteria for Site Selection

i. It should have large number of visitors to allow for the assessment of impacts

ii. It be a formally designated MPA/ PA or be in the process of becoming an MPA/ PA.

iii. Based on recommendations of the government and other stakeholders

iv. Such as to ensure that the logistics to get enumerators to and from the site are relatively easy and safe (not a variable when doing virtual data collection)

Site Selection Process

- Speak with government counterparts and project stakeholders to get consensus on a site. Even if the site selected is not an ongoing project site, the results of this study could be applicable to other areas as well.

4. Organize Data Collection

Five types of surveys need to be administered to estimate the economic impact of protected area tourism on local economies.

The household and local business survey data were entered on tablets using the Open Data Kit (ODK) platform for Android.

1. Government PA expenditures and revenues
2. Household survey
3. Tourist survey
4. Tourism Business survey
5. Non-tourism business survey

4. Organize Data Collection

The surveys include questions on:

5. Do Field Work

- Enumerators need to be trained (virtually and in-person) on the surveys instrument
  - Training enumerators takes 1 week
  - Certificates can also be provided at the end of the training to motivate university students
- Its important that one day is set aside for a “pilot” so that the enumerators get familiar with asking questions . The pilot can be done at a site similar to the actual site. It need not be located near the selected site.
- Surveying each site takes 2 - 3 weeks (with weekends off).

5. Do Field Work

- Once the protected area is selected, the team needs to travel to the site.
- Communities in the area that are part of the local economy are randomly selected from a master list provided by government and/or community chief
- In each village, roughly 45–55 households are randomly selected using an every-nth household sampling strategy based on the size and geographical dispersion of the community
- Participation in the surveys is voluntary and respondents were not compensated

6. Do Analysis

- Data analysis is done by economists trained in the LEWIE methodology
- For this study, the team worked with Prof. Ed Taylor and his team at UC Davis
- Time taken after data collection -
  - Date Clean up: 15-20 days
  - Data Analysis:15-20 days
  - Econometrics: 20-30 days
  - Modelling and Simulations: 1 month
  - Report Writing: 1-2 months

Make sure to share your findings prior to publishing with local stakeholders who participated in the launch of the study to incorporate their feedback and generate buy-in for the results.

For World Bank teams, follow internal quality assurance process

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7. Prepare Outputs and Disseminate Results

- **Rich Dataset** - of households, tourists, tourism businesses, etc.
- **Report –** that includes findings
- **Policy Notes –** based on findings simulations

- Share your findings through webinars, events, promoting on social media and generate the awareness and impetus for action

Additional tip: You can also complement this study with a cost-benefit analysis, a Bio-LEWIE, tourism concessions analysis, etc.

For more information

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