



An Introduction to Research at WRI Ross Center for Sustainable Cities

This learning guide provides an overview of research standards and processes for staff of WRI Ross Center for Sustainable Cities. This is meant to be an internal capacity building resource specifically designed for research staff who are either contributing to or managing research projects across the Ross Center network.

This guide will help research staff to:

- Understand the foundations of quality research at WRI Ross Center.
- Learn the steps of the quality assurance process for WRI-branded knowledge products.
- Know how to fill out a publication plan.
- Understand what services the Research & Knowledge Exchange (RKE) team provides and how to engage them in the quality assurance process.
- Review the rules for budgeting for the RKE team's time.

- Learn how to find additional research and writing resources.

Course Content

Introduction

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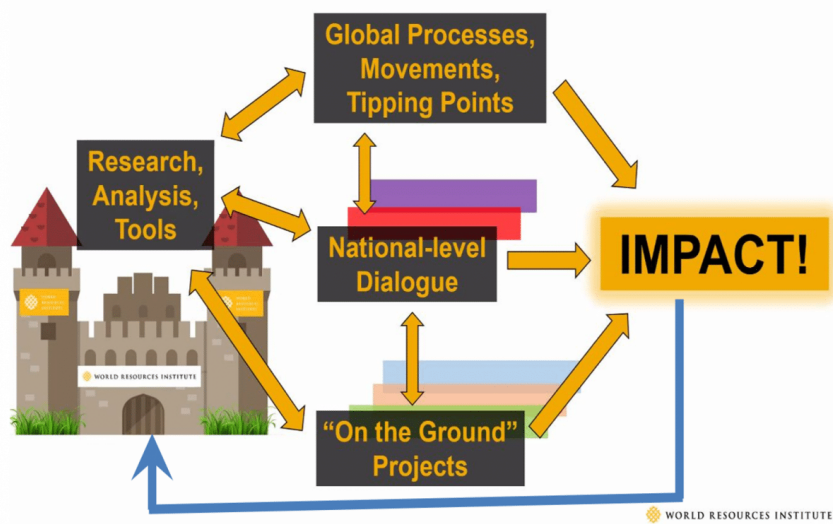
What research standards does WRI Ross Center follow?

Research products produced by WRI Ross Center must meet the [WRI standards of excellence for knowledge products](#):

- **Credible:** research presents balanced view of all relevant evidence and avoids bias; recommendations are derived only from the evidence and the research is transparent.
- **Adds value:** research provides new knowledge that increases understanding of an issue or its context and advance a project's broad objective.
- **Fit for audience:** research products are written and presented in a manner that best informs and empowers the target audience and published at a time when they are likely to achieve maximum influence.
- **Well written:** research publications follow a logical structure and are presented as a focused narrative with limited jargon and correct grammar and spelling.
- **Institutionally coherent:** research is aligned with WRI's strategy and draws from collaboration across WRI's matrix when appropriate; it acknowledges any differences in conclusions with other related WRI publications and clearly explains the reason for these differences.

What is research at WRI Ross Center?

Research at WRI Ross Center is not only evidence-driven, but it is actionable and is meant to fill the gap between knowledge and practice, creating tangible impact on the ground. Our commitment to research excellence underpins our reputation as a trusted source of information. It distinguishes us from our peers, helping us secure a seat at the decision-making table, win funding and recruit and retain the best staff.



To ensure that the research and recommendations we are putting out there are trusted, based on fact, and will actually have a positive impact in cities around the world, we rely on a robust quality assurance process overseen by the independent Research, Data, and Innovation (RDI) team within WRI, along with the Research and Knowledge Exchange (RKE) team within WRI Ross Center. WRI is one of the few nongovernmental organizations with central staff dedicated to creating a strong learning culture and ensuring research excellence across programs and international offices.

Approaching the research process

Research at WRI Ross Center should be thoughtfully conducted and have a strong methodological base. In securing funding for research, the standards of excellence and quality assurance process should be clearly outlined from the start. Funders should understand that we do not operate as consultants and are committed to conducting independent and objective research. Having a conversation up front with funders about the importance of research independence, our open data policy, and how research findings will be published (whether or not they are aligned with preconceived outcomes) is critical to establishing a solid base from which to begin your research.

Steps in the research process include:

- ✓ Define the problem
- ✓ Identify a clear research question
- ✓ Conduct a systematic literature review
- ✓ Carry out the research (quantitative/qualitative analysis)
- ✓ Write up research findings
- ✓ Put your draft research findings through peer review
- ✓ Address reviewer comments and finalize draft
- ✓ Publish research paper

The RDI team has research methodology training that can help you to design a robust qualitative, quantitative, or mixed-methods research approach for your project (this can be found on LearnWRI and requires registration) or develop a strategy to embed learning throughout your project. The RDI team is also working on a map making and a literature review training which will be launching soon. This [research plan](#) can also help you to frame and organize your research project while this [guide to the use of evidence](#) can ensure that you are basing your research on solid evidence. This [one pager on the WRI review process](#) gives you a snapshot of the steps involved in our quality assurance process.

Please reach out to either the RKE or RDI team to discuss or brainstorm any research idea you have at the early stages of the project or concept note.

Tips for conducting high-quality research

1. Use disaggregated data at city scale when available. Remember to document all sources.
2. Remain objective.
3. Be prepared for reviewer pushback and don't take it personally.
4. Stick to your evidence-driven results even if they disprove your hypothesis or preconceived ideas.
5. Make use of WRI's library resources—guidance to accessing the library can be found [here](#).
6. Document all assumptions.
7. Work with a substantive editor (an editor who helps with the structure, narrative and flow of the draft, not just the grammar and editorial style) if you are stuck on the writing, if there are many authors, or if you are struggling to get a good logical flow to the draft.
8. Contact RKE and RDI early and often! The RKE team in particular brings expertise on urban issues.

Research product typology—reports, issue briefs, and guidebooks

The most finalized, polished knowledge products include reports, issue briefs, and guidebooks. These all go through a two-step, sequential internal and external review and are officially approved by the RDI team (with RKE providing informal comments/reviews and final sign off when necessary). This [interactive timeline](#) can help you plan the timing of each step in the review process. Note that because reports, guidebooks and issue briefs have color photos and graphics, they are more expensive to produce.

- **Reports** share the results of in-depth research, typically based on extensive evidence. They require a foreword that is usually signed by WRI's President or International Office Directors.
- **Issue briefs** are short (fewer than 25 pages) and inform policymakers in governments or international organizations.
- **Guidebooks** are designed to help users apply a clearly defined standard, practice, or process. Our most influential guidebooks were all tested by users as an integral part of their development.



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HOW TO ENABLE ELECTRIC BUS ADOPTION IN CITIES WORLDWIDE

*A Guiding Report for
City Transit Agencies
and Bus Operating Entities*

XIANGYI LI, CAMRON GORGUINPOUR,
RYAN SCLAR, SEBASTIAN CASTELLANOS



Federal Ministry
for Economic Cooperation
and Development

WRIROSSCITIES.ORG



THE 8 PRINCIPLES OF SIDEWALKS

Building more active cities

WRIROSSCITIES.ORG

A guidebook on principles for sidewalk development.

Research product typology—working papers, technical notes, learning guides, and tools

Working papers, technical notes, and practice notes are typically shorter publications that have simpler design elements (e.g. no color photos, simpler graphics, etc.). Because of this, they tend to go through review faster and are cheaper to design and layout. These publications can go through simultaneous review (internal/external) and RKE typically oversees the approval process. Apps should be tested by users. See the [Knowledge Product Guidelines](#) for a detailed overview of all knowledge products and their review processes.

- **Working papers** contain preliminary analysis. The working paper template is deliberately designed to communicate a “work in progress” and to reduce production time and costs. This includes the requirement for a disclaimer on the front cover stating that the content is preliminary. They also adhere to a [10,000 word limit](#).
- **Technical notes** are publications documenting a research or analytical methodology that underpins a published WRI-branded knowledge product. In some cases, technical notes may support a blog. Technical notes should not introduce new recommendations.
- **Practice notes** are case studies used to share experiences and insights gleaned from the implementation of a specific activity in a single location. Any recommendations or lessons presented should be tailored to the particular context addressed. Standalone case studies are treated as practice notes.
- **Interactive applications** include data user-interfaces, web maps, mobile applications, interactive tools, and crowd sourcing products.



ACCELERATING BUILDING DECARBONIZATION: EIGHT ATTAINABLE POLICY PATHWAYS TO NET ZERO CARBON BUILDINGS FOR ALL

RENILDE BECQUÉ, DEBBIE WEYL, EMMA STEWART, ERIC MACKRES, LUTING JIN, AND XUFEI SHEN

EXECUTIVE SUMMARY

Highlights

- Cities will lead the shift to net zero carbon buildings (ZCBs) and will therefore play a major role in achieving the goal of a decarbonized world.
- ZCBs are more achievable when the definition is expanded beyond the boundary of the individual building to allow the use of off-site clean energy or consideration across a portfolio of district or municipal buildings.
- This working paper lays out a menu of pathways to achieve ZCBs, with a focus on operational carbon emissions. Each pathway is a combination of up to five components: basic energy efficiency, advanced energy efficiency,¹ on-site carbon-free renewable energy, off-site carbon-free renewable energy, and carbon offsets only in cases where efficiency measures and renewables cannot meet 100 percent of energy demand.
- Policies shape a city's ability to achieve ZCB pathways. This working paper draws on reviews of current policy frameworks and consultations with stakeholders in four countries—India, China, Mexico, and Kenya—to determine how policies at the national and subnational level enable or disable the different ZCB components and pathways.
- Even within these different policy contexts, we find ZCB pathways that are feasible today, making a decarbonized building stock a target increasingly within reach for urban policymakers.

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Working Papers contain preliminary research, analysis, findings, and recommendations. They are circulated to stimulate timely discussion and critical feedback, and to influence ongoing debate on emerging issues. Working papers may eventually be published in another form and their content may be revised.

Suggested Citation: Becqué, R., D. Weyl, E. Stewart, E. Mackres, L. Jin, and X. Shen. 2019. "Accelerating Building Decarbonization: Eight Attainable Policy Pathways to Net Zero Carbon Buildings for All." Working Paper. Washington, DC: World Resources Institute. Available online at <https://www.wri.org/publication/accelerating-building-decarbonization>.





COSTS AND EMISSIONS APPRAISAL TOOL FOR TRANSIT BUSES

ERIN COOPER, ERIN KENNEY, JUAN MIGUEL VELASQUEZ, XIANGYI LI, AND THET HEIN TUN
CONTRIBUTORS: DARIO HIDALGO, ANQI ZHAO, AND MAGDALA ARIOLI

EXECUTIVE SUMMARY

The Costs and Emissions Appraisal Tool for Transit Buses (“the Tool”) is intended to help bus operators and transit agencies make informed decisions about alternative bus types during the preliminary analysis phase and to help them determine whether the transition to a “clean fleet” is financially viable and worthwhile based on expected emissions reductions. The Excel-based Tool allows users to compare the cost and emissions reductions of two bus fleets, each composed of up to three bus types. Bus types can differ in terms of fuel type, the technology used to achieve different emissions standards, and length. Users can input fuel and vehicle unit cost data for a city or country. If they lack these data, they can use the default data for Brazil and the United States included in the Tool. Based on either the inputted or default data, the Tool calculates the costs and emissions of each bus type and the total costs and emissions of each fleet.

Application of the version of the Tool presented here should identify gaps in user needs, which the authors hope to address in subsequent versions. Updates will also expand the default cost data to include other locations in the developing world.

1. MOTIVATION

Significant work has been conducted on vehicle emissions, including the development of tools that compare the costs and emissions of fleets in the United States (examples include Argonne National Laboratory’s GREET Model and Duke University’s Best Bus Model). However,

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Technical notes document the research or analytical methodology underpinning a publication, interactive application, or tool.

Suggested Citation: Cooper, E., E. Kenney, J. M. Velasquez, X. Li, and T. H. Tun. 2019. “Costs and Emissions Appraisal Tool for Transit Buses.” Technical Note. Washington, DC: World Resources Institute. Available online at: www.wri.org/publication/transit-buses-tool.



Overview of quality assurance process for research products

WRI Ross Center follows the established WRI review process for all WRI/Ross Center-branded knowledge products. This includes knowledge products published by partners but that have the WRI logo on them. Knowledge products that are produced by a partner organization but that have significant contributions from WRI staff should carry the WRI logo and should go through the WRI peer review process, or an

agreed-upon customized peer review process.

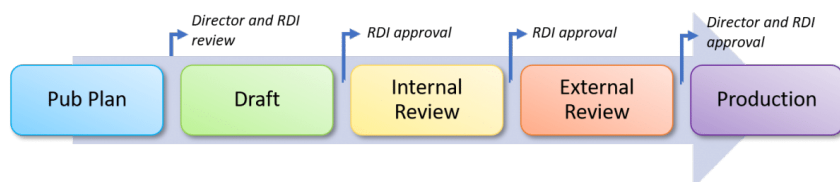
The main steps of the review process **for the author** include:

- Submitting a pub plan
 - Both RKE and RDI provide feedback
- Submitting a draft for review approval
 - RKE will approve all working papers, practice notes, technical notes, and learning guides
 - RKE *and* RDI will be involved in approving all reports, issue briefs, and guidebooks
- Internal/external review
- Addressing reviewer comments and submitting revised draft and review memo
 - RKE will provide final approval for all working papers, practice notes, technical notes, and learning guides
 - RKE *and* RDI will be involved in providing final approval for all reports, issue briefs, and guidebooks
- Putting publication through copyediting, design, and layout of publication. This is done with the Core Comms team.

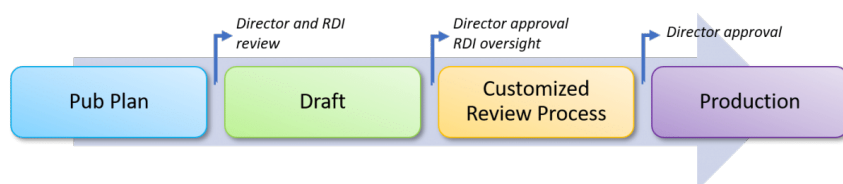
INTERACTIVE PUBS TIMELINE

WRI Global (General)

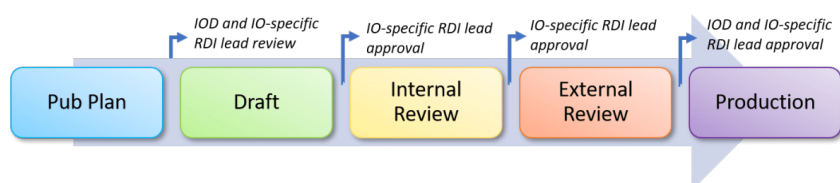
Reports, Issue Briefs, and Guidebooks



Working Papers, Technical Notes, Practice Notes



WRI International Offices (General)*



* IOD = International Office Director

Guidance for filling out a pub plan

There are several different publication plans you can use which correlate with the end product you are hoping to produce:

- [Publication Plan](#)
- [Technical Note Plan](#)
- [Interactive Application Plan](#)
- [Learning Guide Plan](#)

WRI uses [Editorial Manager](#), a cloud-based manuscript submission and peer-review tracking system, for all WRI-branded knowledge products. First-time users will receive an email from WRI Publications with login instructions. The step-by-step guidance can be downloaded [here](#). For questions, please contact [RDI](#).

The pub plan is the first step in the quality assurance process and should be filled out after a knowledge product is funded but before substantive progress on the research takes place. The publication plan is a living document, so it is never too early to start filling one in, although it should be mostly complete before submitting to Editorial Manager. The publication plan helps authors consider the added value of their research and its linkages to WRI Ross Center's overall strategy. It contains strategic questions about the target audience, thesis statement, intended outcomes, data used, and an outline of your publication.

Once you have filled out the Word version of the pub plan, log on to Editorial Manager as an **author** and click "submit new manuscript". This will guide you through the submission process step-by-step—it captures metadata for your product and includes a place for you to upload the Word version of your pub plan.



The screenshot shows the login interface for Editorial Manager. At the top, a dark blue banner reads "Welcome to Editorial Manager® for World Resources Institute". Below this, on the left, is the World Resources Institute logo. The main content area is titled "Please Enter the Following" and contains fields for "Username:" and "Password:". To the right of these fields is a link "Insert Special Character". Below the login fields are four buttons: "Author Login", "Reviewer Login", "Editor Login", and "Publisher Login". Further down are links for "Send Login Details", "Register Now", and "Login Help". At the bottom of the main area, there is a note: "Check out the WRI Knowledge Products Guidelines [here](#) (open link in new tab or window)." and a footer line: "Software Copyright © 2020 Arise Systems Corporation. Arise Privacy Policy | Publisher's Data Use Privacy Policy". A dark blue navigation bar at the very bottom contains four links: "Instructions for Authors", "Instructions for Reviewers", "About WRI", and "Contact WRI".

Writing resources

Impactful publications are well-written publications.

Publications must be well-written for them to be picked up by their target audience and achieve their intended outcomes. Publications that are too long, too difficult to understand, that lack grammatical accuracy, or are full of jargon and buzzwords will not capture the attention of readers and do a disservice to the research underlying them. Luckily, we have several resources for authors looking to improve their writing:

- [Writing training—module 1](#)
- [Writing training—module 2](#)
- [Tips for effective writing](#)
- [Tips for concise writing](#)

- [Tips for using visuals to communicate research](#) + [presentation](#)
- [Zotero Reference Management Software Training](#) (search “Zotero” in LearnWRI’s content library)

Emily Matthews, our in-house senior editor, can also help you with your writing and editing needs for all English language publications and can point you to additional help for non-English language publications.

How can the RKE team help you with your research needs? Quality Assurance

The RKE team can support you in both the logistical and substantive aspects of the quality assurance process, including:

- Provide **early upstream support** on research design, data collection, and analytical work
- Provide feedback on all Cities knowledge product pub plans with RDI
- Provide **comments, approval, or internal reviews** on all Cities knowledge products
- Provide input on apps and tools, including production of maps and graphics to be included in pubs or comms materials
- Provide reviews on non-WRI branded Cities products (i.e. NCE, CUT, and GCA papers to ensure consistency)
- Provide **logistical support and coordination** for Cities publications going through review, including communicating new RDI policies and procedures
- Provide **technical review of proposals** to ensure knowledge gaps and time commitments to conduct research and publish knowledge products are properly accounted for
- **Review blogs** not based on peer reviewed knowledge products
- Conduct meetings to **connect strategy to knowledge production** across teams

How can the RKE team help you with your research needs? Internal Capacity Enhancement

The RKE team can help to develop the research capacity of staff by:

- Support RDI in **developing/enhancing Cities staff’s research skills**
- Participate in hiring process for managers and staff to assess research skills
- Provide ongoing **support and tools to capture the impact** of the Cities Program’s on-the-ground work
- Engage Cities staff in new research projects as part of capacity enhancement and sharing local knowledge
- Provide Cities research/seminar event support in collaboration with Comms

How can the RKE team help you with your research needs? Knowledge Creation

The RKE team can support knowledge creation, integration, and alignment across workstreams by:

- **Lead new research initiatives**, identifying knowledge gaps with Cities staff and external experts

- Respond to time-sensitive research-related requests
- Review/edit public-facing communications and research products to **ensure consistent messaging across workstreams** (e.g. presentation narratives, blogs)
- Lead on cross-workstream research to connect ideas across the matrix (e.g. inclusive climate action, land value capture, urban transformation)
- Provide **research/writing support** on WRR-related products and advance WRR ideas into action, specifically to embed equity and inclusion considerations into WRI Ross Center activities

Budgeting for RKE

To ensure adequate support on knowledge products, teams should budget as part of their projects:

- The equivalent of **5% of time of Cities Director of Research** (Anjali Mahendra) **per knowledge product** (publication or tool) that will go through WRI's peer review process.
- The equivalent of **1% of time of Cities Director of Research** (Anjali Mahendra) **per Learning Guide** that will go through WRI's peer review process.

These percentages should be calculated based on annual labor cost of Anjali Mahendra. Contact your PC with questions. Teams are encouraged to start discussing with the RKE team early to share their plans, share any concerns with budgeting these amounts, and accordingly tailor commitments to funders. To initiate these discussions, please consult with Anjali Mahendra or Robin King.

Additional research resources

[Banyan](#), WRI's intranet, is a one-stop-shop for a variety of resources on research, writing, reviewing. You can also find many helpful resources on the [Research Resources](#) SharePoint site (be sure to bookmark this site in your browser!). Below are a few of the useful resources available:

- [Acknowledging donors and corporate partners](#)
- [Accessing library journals and databases](#)
- [Guidance for writing an executive summary](#)
- [Guidance for using the reference management software, Zotero](#)
- [Responding to reviews](#)
- [Learning Guide content guidance](#)
- [WRI knowledge product style guide](#) (editorial style of knowledge products, **not** communication products)
- [WRI knowledge products guidelines](#) (content and process guide for KPs)

The [Ross Center Knowledge Repository](#) serves as an archive for all *non*-WRI branded research products (including slidedecks, donor reports, datasets, etc.) that Ross Center staff have produced or contributed to. Anyone at the Ross Center can add to this repository. Please note that these products don't go through the official WRI review process and should not carry the WRI logo nor should they be posted on a public website. Contact [Maria Hart](#) with questions.

For general questions on publications, the review process and Editorial Manager, contact the Publications Coordinator, [Emilia Suarez](#).

FAQs

- **Who do I contact with publications questions?** The Publications Coordinator, [Emilia Suarez](#), can answer general questions about publications and the review process and Maria Hart can answer Cities-specific pubs questions.
- **How long does it take to publish at WRI?** It depends! Plan for at least 5 months to get from pub plan to final launch for shorter working papers and technical notes, and at least 8 months for reports and guidebooks. This [interactive timeline](#) can help you plan.
- **Does my research product have to go through review?** If it is public-facing, contains new research or analysis and will carry the WRI logo, yes! Communications products don't go through peer review (see the Comms LG [insert link] for more information).
- **What do I do if I don't have time or funding for the review process?** In general, if you don't have time or money to put your research product through review, it can't carry the WRI logo. To avoid this situation, make sure you budget enough time and money in your proposal to go through the full review and production process. Contact [Maria Hart](#) with questions.
- **Who do I contact for questions about design and production?** [Romain Warnault](#) on the Core Comms team can help.

Summary

- Our research provides the evidence to support our engagements on various integrated solutions at the global, national, and local levels. And our on-the-ground projects and policy work generates important lessons and evidence that feeds back into our research process.
- Research at WRI Ross Center must meet WRI's Standards of Excellence: credible, adds value, fit for audience, well written, and institutionally coherent.
- Resources like the [research plan](#) template and the [guide to the use of evidence](#) can provide a solid starting point for your next research project.
- Reports, issue briefs, and guidebooks are more formal, polished knowledge products that go through sequential internal/external review. Working papers, technical notes, and practice notes are shorter and less design-heavy and go through simultaneous internal/external review. Apps go through user-testing.
- The first step in the quality assurance process is submitting a pub plan to [Editorial Manager](#).
- The RKE team provides a service to WRI Ross Center staff by supporting a diverse set of research needs. RKE provides feedback on research proposals and publication drafts, helps with capacity building for staff, ensures consistency in messaging across the Center, supports new research initiatives, and provides logistical and coordination support to teams throughout the quality assurance process.
- To help the RKE team best support you on delivering strong knowledge products, all teams must budget for the RKE team's time.

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<https://thecityfixlearn.org/courses/an-introduction-to-research-at-wri-ross-center-for-sustainable-cities>