Request for Proposals (RFP)
Visualizing Human Impacts of Country-Level GHG-GDP Divergence

Request

This request for proposals seeks to identify an organization, likely a web design or data visualization firm, interested in working with the World Resources Institute (WRI) to produce an interactive visualization for understanding selected human impacts of country-level GHG-GDP divergence. This visualization will be the preliminary public release of a new area of work demonstrating why and how countries can continue to grow economically while shrinking carbon emissions.

About the World Resources Institute

World Resources Institute (WRI) is a global non-profit research organization that spans more than 50 countries, with offices in Brazil, China, Europe, India, Indonesia, Mexico, and the United States. Our work focuses on six critical issues at the intersection of environment and development: climate, energy, food, forests, water, and cities and transport; and three crosscutting themes: governance, finance, and business. WRI's research is conducted with the goal of creating change on the ground.

Background context and rationale

Between 2000 and 2015, 30 countries reduced greenhouse gas emissions while continuing to grow their economies. The United States is the largest country to experience multiple consecutive years in which economic growth has diverged from growth in carbon dioxide emissions. Beyond the U.S., the group of divergent countries spans four continents and 2015 per-capita GDP from $2,115 in Ukraine to $ 80,215 in Switzerland. Over the same period, many countries experienced wrenching economic and social transitions including employment churn and income redistribution. The purpose of this work is to explore how economic and social indicators have varied in GHG-GDP divergent countries and countries that still have linked growth of GDP and GHG emissions.

Three country-level datasets comprise the core of this work: GHG emissions (CO_2 production and consumption basis as compiled by ORNL/CDIAC, BP, UNFCCC), country economic growth (real GDP, GNI, and household consumption from World Bank, IMF), social and human impacts (employment, GINI index, educational attainment, urbanization, gender ratios as tracked by World Bank WDI). To introduce the concept of GHG-GDP divergence, the initial portion of the data visualization will focus on the relationship between country-level GHG emissions and economic activity: which countries have reduced emissions while continuing to grow their economies? After describing groups of countries per their emissions and economic growth, the data visualization can would users to explore social and human impacts, initially with selected metrics and then with simple regressions to assess salience and correlation. The data visualization will be accompanied by a WRI technical note explaining the background, analysis methods, results, and initial implications of country-level GHG-GDP divergence.

Activities

The firm will work with WRI staff to develop the data visualization to publish, share, and analyze country divergence data publicly. The purpose of the visualization is to enable users to more easily access and understand country GHG-GDP divergence and related human-impacts data.

The data visualization is expected to have 3 levels:

- Introduction: graduated color map where users can hover with mouse or click on particular countries for more information, perhaps complemented with a scatter plot such as below
- Details: tabular datasets with corresponding visualizations (e.g., sparklines) based on indicator data that are sortable by country, indicator, and time period
- Hypothesis testing: light quantitative analysis illustrating correlations and salience of selected variables

The visualization can be built on and integrated with WRI's Resource Watch application programming interface (API); data and final product will be hosted by WRI.

Deliverables

• Kick-off call or meeting with WRI at project outset
• Weekly check-in with WRI team on work progress, or as necessary

Data Visualization design

- Interactive data displays:
  - Introduction: geographic display of countries' 2000-2015 climate performance via graduated color map based on index of country-level GHG-GDP divergence; complementary scatter plot [all data have already been compiled]
  - Details: tabular datasets of ΔCO_2, ΔGDP, and selected social and economic indicators per country [all data have already been compiled]
  - Theories: scatterplots to illustrate correlations and salience of selected variables
- Technical and information architecture design proposal
- Multiple design iterations of the interactive data portal, including wireframes and mockups
- Additional, nice-to-have function would be drop-downs or other tools allowing users to explore other time periods (beyond the 2000-2015 default), variables, and country groups

Prototype

• Creation and hosting of a development prototype as defined by the above requirements
• Testing and revision of the prototype

Deployment

• Transfer of the data visualization to WRI's production servers and source code to WRI's Github repository.

Individual /Organization requirements

• List of team members – 1 page max CV per individual
• Organizational information
• 2 examples of similar work previously undertaken (citations)

Budget

Proposals are requested in the region of $8,000-$10,000.

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Timing

The visualization should be delivered within 6 weeks of contract signing; aim is for this phase of work to be completed by September 30, 2017; additional work may follow with additional funding.

Application instructions and details

Application deadline: August 22, 2017

A successful proposal will:

- Describe in detail the firm's proposal to address the requirements outlined in this RFP, including details such as technologies to be used.
- Describe the project process and methodology including sample deliverables from past projects of similar size and scope. Document examples of the firm's experience in designing/developing each of the project requirements.
- Provide a timeline for the completion of the work.
- Describe the fee structure and how WRI will be charged.

Proposals should set out how the activities and deliverables will be undertaken. A simple budget table should also be included, highlighting person time and associated cost per activity / deliverable. Proposals should no longer than 10 pages including CVs, citations and the budget table.

All proposals should be in PDF format and should be e-mailed to Nate Aden at naden@wri.org.

Evaluation criteria

Proposals will be scored according to the following criteria:
Approach 50%
Team 30%
Cost 20%

Contract Terms

WRI will negotiate contract terms upon selection. All contracts are subject to review by WRI's legal counsel, and a project will be awarded upon signing of an agreement or contract, which outlines terms, scope, budget and other necessary items. Provisions of this RFP and the contents of the successful responses are considered available for inclusion in final contractual obligations.

Payment

50% will be paid upon contract signing and 50% upon satisfactory completion of the data visualization.

Contact

Firms may request an interview with WRI prior to submitting a proposal. Please direct all responses to this RFP and/or any questions to:
Nate Aden naden@wri.org

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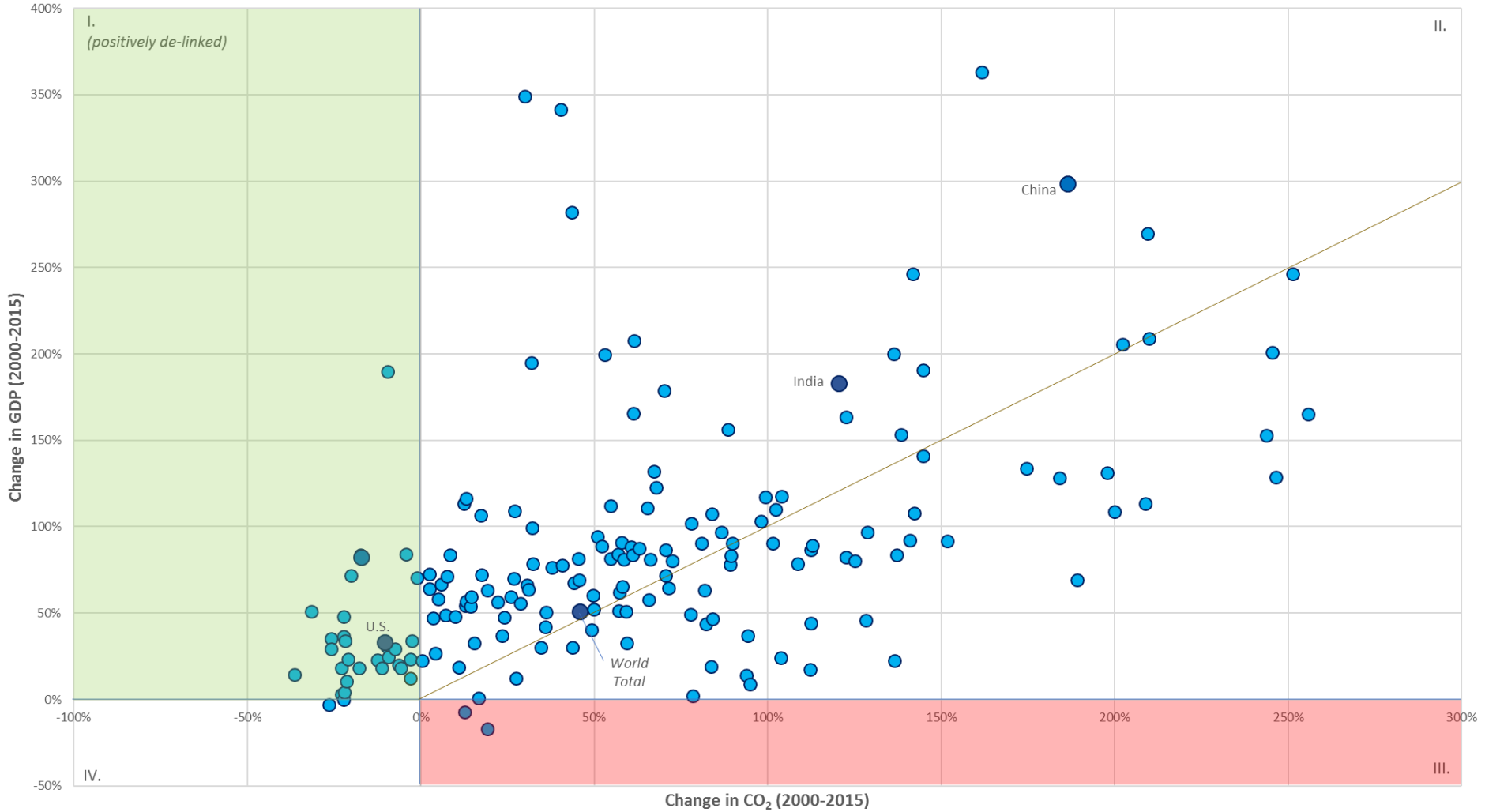
Scatterplot of 176 Country Changes in GDP versus CO_2 Emissions (2000-2015)



Sources: UNFCCC (2016), Boden et al. (2016), World Bank (2017). Note that carbon dioxide emissions data cover fossil fuel combustion and cement-related emissions from production activities; GDP data are based on market prices (constant 2010 US$). Six countries display other period information due to missing 2015 data; 3 outlier countries are not displayed (Tanzania, Mongolia, Equatorial Guinea); see Appendix for individual country data and details.