

## **Jorge Esteban Gómez Paredes, Ph.D.**

Hda. San José s/n y Proyecto Yachay, Urcuquí - Ecuador

+593 (0) 99-848-7859

jgomezp@unsdsn-andes.org

### **WORK AND RESEARCH**

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My work is focused on implementing the United Nations (UN) 2030 Agenda for Sustainable Development. To this end, I work on promoting collaboration across organizations and building support for projects that advance the achievement of the UN Sustainable Development Goals (SDGs). This often involves assembling and coordinating multidisciplinary work teams, assisting in projects' planning and project management processes, as well as in fundraising.

My academic research fits within the fields of ecological economics, industrial ecology, and socio-environmental ethics, being particularly related to natural resources and human labor, as well as with net energy and greenhouse gas (GHG) emissions analyses. I have combined statistical tools and Input-Output models to evaluate GHG reduction targets based on energy efficiency, considering consumption patterns and the Jevons Paradox. With a similar approach, I have assessed the total (direct and indirect) use of natural resources (e.g. water) along value chains. I have also applied Input-Output analysis to develop the notion of "social footprints" (e.g., labor footprints), which in combination with similar environmental indicators ("environmental footprints") allow for a more complete analysis of the socio-environmental implications of economic structures, and constitute useful inputs to Life Cycle Sustainability Assessments.

As an academic, it is of my interest to continue developing and applying macro-economic models to evaluate sustainable (or unsustainable) consumption and production, assess how changes in consumption and production patterns modify an economy's socio-ecological metabolism, and to develop socio-environmental metrics and indicators suited to new socio-economic paradigms as well as to monitor progress towards the SDGs

It is also of my interest to continue mobilizing organizations from different sectors of society (academia, government, industry, and civil society) to work together in the development, implementation, and/or support of projects that contribute to the achievement of the SDGs.

## WORK EXPERIENCE

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- October 2018 – Present      **Adjunct Assistant Professor.** Earth & Ocean Sciences Division, Nicholas School of the Environment. Duke University, USA.
- September 2015 – Present      **Manager of the “Sustainable Development Solutions Network for the Andean Region” (SDSN Andes).** The regional chapter of the global SDSN that works under the auspices of the United Nation’s Secretary General, for advancing SDGs implementation in Argentina, Bolivia, Colombia, Chile, Ecuador, Peru, and Venezuela.
- September 2015 – Present      **Researcher** on Sustainability Science.  
**Lecturer** on: Sustainable Development; Ethics and Social Responsibility; Science Communication; Globalization and Entrepreneurship.  
**Member** of the permanent Commission for Student Practices & Society Engagement Projects. Yachay Tech University, Ecuador.
- April 2009 – March 2015      **Researcher** (Master’s and Ph.D. candidate). Department of Socio-Environmental Energy Science. Kyoto University, Japan.
- September 2008 – March 2009      **Head of Health, Environment, and Safety** (Downstream oil sector -fuels section-). PRIMAX, Ecuador.
- October 2004 – September 2008      **Head of Health, Environment, and Safety** (Downstream oil sector -fuels section-). Repsol YPF Comercial del Ecuador S.A., Ecuador.
- December 2003 – October 2004      **Field Operations Manager** (Environmental remediation and consulting). ARCOIL Cía. Ltda., Ecuador.

## MEMBERSHIPS AND ASSOCIATIONS

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- January 2018 – Present      **International Input-Output Association (IIOA)**
- January 2018 – Present      **MMRB Technical Committee**, comprised by WWF Colombia and other nine organizations focused on conservation activities in the Mira Mataje River Basins (MMRB)
- November 2017 – Present      **Rotary Club “Quito Colonial”**
- November 2017 – Julio 2018      **Ecuador’s Ministry of Environment’s National Biodiversity Working Group** (Grupo Nacional de Trabajo en Biodiversidad -GNTB-) Subgroup on Bioeconomy
- October 2011 – Present      **International Society for Ecological Economics (ISEE)**
- August 2011 – Present      **Institute for Global Environmental Strategies (IGES)**

## EDUCATION

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- March 2015      **Doctor of Energy Science**  
**Kyoto University**, Japan (Department of Socio-Environmental Energy Science)  
Thesis: 労働フットプリント：複雑な経済における社会的に望ましくない労働の利用を評価するための枠組み  
(Labour Footprint: A framework to assess the use of socially undesirable labour in a complex economy)
- March 2012      **Master of Energy Science**  
**Kyoto University**, Japan (Department of Socio-Environmental Energy Science)  
Thesis: エネルギー消費とリバウンド効果に基づくインドの家庭向高効率照明プロジェクトの評価  
(Assessment of efficient lighting projects in Indian households based on total energy requirements and the rebound effect)
- December 2007    **Post-Graduate Diploma in Project Design and Management**  
**Universitat de València**, Spain
- September 2003   **Environmental Engineer**  
**Universidad Internacional SEK**, Ecuador  
Average overall grade: 9.2 / 10  
Thesis: *Diagnóstico del estado trófico de la Laguna de Limoncocha y determinación de la calidad del agua del sistema hídrico de la zona.*  
(Evaluation of Limoncocha Lake's trophic state and determination of the area's hydric system water quality).

## CERTIFICATIONS

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- May 2003      **Auditor in Occupational Health and Safety Assessment Systems, OHSAS-18001.** Lloyd's Register Quality Assurance, Ecuador.
- March 2003      **Auditor in Environmental Management Systems, ISO-14001.** Lloyd's Register Quality Assurance, Ecuador.
- October 2002    **Auditor in Quality Management Systems, ISO-9001.** Bureau Veritas, Ecuador.

## PROJECTS

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- December 2018 – May 2019     **Principal Investigator (PI).** Project: “Local Realities and Global Responsibilities: Tracking the impact of Argentina’s soybean commodities on the SDGs”.  
A six-month project, funded by the GIZ (70,000 EUR), developed by a team of researchers from Sydney University, University of Buenos Aires, Stockholm Environmental Institute, the Institute for Participation and Development (INPADE), in close collaboration with the Bariloche Foundation and the National Agricultural Technology Institute of Argentina.
- January 2018 – Present     **Co-Investigator (Co-PI).** Project: “Biodiversity Conservation in the Binational Mira-Mataje River Basins – Building Biophysical and Socio-Environmental Bases for Conservation and the Adaptive Management of Ecosystem Services”. A three-year project (2018-2021), funded by the John D. and Catherine T MacArthur Foundation (870,000 USD), developed by a multi-organizational coalition comprising universities, NGOs, and public research institutes from Colombia and Ecuador.
- July 2017 – Present     **Principal Investigator (PI).** Project: “Influence of Economic Structures on the SDGs – Effects from, to and within the Andean Region” (*ODDS for Progress*).  
A long-term initiative led by the SDSN Andes, in collaboration with the Integrated Sustainability Analysis Research Team of the University of Sydney, Australia.

## PUBLICATIONS

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- Hoff, H., Monjeau, A., **Gómez-Paredes, J.**, Frank, F., Rojo, S., Malik, A., & Adams, K. (2019). Spillovers in SDG implementation. *Policy Brief*. Stockholm Environment Institute (SEI)
- Yáñez-Muñoz, M., P. Bejarano, C. Proaño, P. Mena-Valenzuela, J. Brito, E. Freire, S. Nogales, A. Pazmiño, P. Segarra, C. Valdospinos, **J. Gómez-Paredes**, y F. Prieto. 2019. *Biodiversidad de la Cuenca Binacional Mira-Mataje: Una visión general de su flora y fauna desde Ecuador*. pp. 22-26. En: J.L. Pantoja y S.V. Poats (eds.); Memorias del seminario: Investigación sobre el agua, su gestión y los servicios ecosistémicos en la cuenca del Río Mira - Ecuador. 21 - 22 de Nov. Universidad Técnica del Norte - UTN y Consorcio Binacional Mira Mataje - CBMM. Ibarra, Ecuador
- Serrano-Palacio, N., & **Gómez-Paredes, J.** (2019). Will our next revolution support or obstruct the achievement of the Sustainable Development Goals? Letter to Editor. *Latin American Journal of Biotechnology and Life sciences – Bionatura*.
- Gómez-Paredes, J.** & Malik, A. (2018) Tracking the Sustainable Development Goals with Input-Output Analysis: A commentary and example. 26th International Input-Output Conference. Juiz de Fora, Brazil.
- Gómez-Paredes, J.** (2018). Educación: Más allá de un objetivo. *RUNAE: Revista Científica de Investigación Educativa*, 1(1), 185-200.
- Alsamawi, A., Murray, J., **Gómez-Paredes, J.**, & Reyes, R.C. (2017). Exporting water from the desert? An analysis of the virtual water content of Saudi Arabian agricultural exports. *International Journal of Water Resources Development*, 1-13.

**Gómez-Paredes, J.**, Alsamawi, A., Yamasue, E., Okumura, H., Ishihara, K. N., Geschke, A., & Lenzen, M. (2016). Consuming childhoods: An assessment of child labor's role in Indian production and global consumption. *Journal of Industrial Ecology*.

**Gómez-Paredes, J.**, Yamasue, E., Okumura, H., & Ishihara, K. N. (2015). The labour footprint: A framework to assess labour in a complex economy. *Economic Systems Research*, 27(4), 415-439.

**Gómez-Paredes, J.**, Yamasue, E., Okumura, H., & Ishihara, K. N. (2013). Energy efficiency to reduce poverty and emissions: a silver bullet or wishful thinking? Analysis of efficient lighting CDM projects in India. *Procedia Environmental Sciences*, 17, 547-556.

## **PEER REVIEWER FOR**

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**Socio-Economic Review.** Oxford Journal

**Ecological Indicators.** Elsevier Journal

## **INTERNATIONAL CONFERENCES, PANEL DISCUSSIONS, AND ACADEMIC EVENTS**

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September 2019      **Scientific Committee Member** at the 7<sup>th</sup> International Conference on Sustainable Development (ICSD), and **Chair** of the Session on Sustainable Consumption and Production. Columbia University, USA.

July 2019            **Panelist.** Theme: “The Role of Spillover Effects in SDG Implementation”. An event of the Federal Ministry for Economic Cooperation and Development (BMZ) and the SDSN, with the participation of Ingolf Dietrich (BMZ), Jeffrey Sachs and Guido Schmidt-Traub (SDSN) Annika Lindblom (Finnish National Commission on Sustainable Development), Erik Giercksky (UN Global Compact), and Seema Joshi (Amnesty International). Harvard Club of New York. USA.

December 2018      **Invited speaker.** Theme: “Education and Innovation for Sustainable Development”. National University of Education (UNAE), Ecuador.

December 2018      **Invited speaker.** Theme: “Gender Equality: Why is it important for Sustainable Development?” Cycle of Conferences to Empower Women in Science – “Conciencia”, 1<sup>st</sup> Edition. Yachay Tech University, Ecuador.

June 2018            **Chair** of the Special Session on Input-Output Analysis and the Sustainable Development Goals, and **Oral presentation** on “Tracking the Sustainable Development Goals with Input-Output Analysis: A commentary and example”. Authors: **Jorge Gómez-Paredes &** Arunima Malik. Paper selected for a conference grant. 26th International Input-Output Conference. Juiz de Fora, Brazil.

December 2017      **Judge** at the Second Edition of the Hult Prize at Yachay Tech, for the Hult Prize 2018 Challenge: Harnessing the power of energy to transform the lives of 10 million people. Yachay Tech University, Ecuador.

September 2017      **Scientific Committee Member** at the 5<sup>th</sup> International Conference on Sustainable Development (ICSD), and **Chair** of the Session on Sustainable Consumption and Production. Columbia University, USA.

- August 2017 **Panelist.** Theme: “Sustainable Energy”. Max Planck Society’s Science Tunnel Exhibition in Quito, Ecuador.
- March 2017 **Panelist.** Theme: “Diversity and Inequalities”. EuLAC Focus collaborative project funded by the European Commission (part of Horizon 2020); a partnership between the European Union (EU) and the Community of Latin American and Caribbean States (CELAC). Event in Quito, Ecuador.
- February 2013 **Oral presentation** on “Accomplishing Japan’s CO<sub>2</sub> emission reduction targets in the absence of nuclear power”. Authors: **Jorge Gómez-Paredes**, Rakesh M. Das, Shota Higashikura, Natsumi Iwata, Ryo Koda, Yasunori Nakai, Kenji Nishioka, Haruki Seto, H.N. Zhang, Kazuchika Yamauchi. GCOE Symposium, “Energy Science in the Age of Global Warming”. Kyoto University, Japan.
- November 2012 **Oral presentation** on “Energy efficiency to reduce poverty and emissions: a silver bullet or wishful thinking? Analysis of efficient lighting CDM projects in India”. Authors: **Jorge Gómez-Paredes**, Eiji Yamasue, Hideyuki Okumura, Keiichi N. Ishihara. Third International Conference on Sustainable Future for Human Security (SUSTAIN) 2012. Kyoto University, Japan.

## **AWARDS AND DISTINCTIONS**

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- January 2013 **Best poster award.** Theme: “Accomplishing Japan’s CO<sub>2</sub> emission reduction targets in the absence of nuclear power”. Authors: **Jorge Gómez-Paredes**, Rakesh M. Das, Shota Higashikura, Natsumi Iwata, Ryo Koda, Yasunori Nakai, Kenji Nishioka, Haruki Seto, H.N. Zhang, Kazuchika Yamauchi. 2012 Annual Meeting of GCOE “Energy Science in the Age of Global Warming”. Kyoto University, Japan.
- May 2004 **Plaque** awarded in recognition of a distinguished research project (undergraduate thesis). Universidad Internacional SEK, Ecuador.
- March 2004 **First place** for undergraduate thesis research project. VII National Science, Technology and Innovation Fair & II International Innovation Contest (category: environment). Universidad Central del Ecuador, FUNDACYT and UNESCO. Centro de Exposiciones Quito, Ecuador. (Newspaper article)
- October 2001 – June 2002 **Elected Representative.** Faculty of Environmental Sciences. Universidad Internacional SEK, Ecuador.

## SCHOLARSHIPS

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- April 2012 – Japanese Government Scholarship: 文部科学省奨学金 (Monbukagakusho)  
March 2015 for PhD studies
- April 2010 – Japanese Government Scholarship: 文部科学省奨学金 (Monbukagakusho)  
March 2012 for Master's studies
- April 2009 – Japanese Government Scholarship: 文部科学省奨学金 (Monbukagakusho)  
March 2010 as a research student
- October 1997 – Partial scholarship - Universidad Internacional SEK  
June 1998 for undergraduate studies

## LANGUAGES

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- **Spanish** Mother tongue
- **English** Proficiency level (*Certificate of Proficiency in English*. ESOL Cambridge, UK)
- **Italian** Advanced level (*Certificazione di Italiano Avanzato*. Centro Culturale Italiano, Ecuador)
- **Japanese** Intermediate level