Frederick S. Pardee Institute for International Futures

Annual REVIEW

2023-2024





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From the Director

Dear Colleagues and Friends,

I am always appreciative of the opportunity for reflection that preparing our Annual Review provides. It's a time when, for a moment, we pause to look comprehensively across our many activities and initiatives. The process helps us not only assess how we are doing; it also provides a foundation for further thinking about where we want to go.

In my view, the past year has been especially good to us:

- Based on our research volume and our academic contributions, we have been officially recognized by the University as a research institute (hence our name has changed from the Pardee Center to the Pardee Institute for International Futures).
- Through the efforts of Pam Hoberman, the Institute's Director of Operations, our work environment has been enhanced and systems have been developed that make possible more strategic deployment of our financial and human resources.
- We continue to have the privilege of partnering with gifted and committed academic and policy colleagues around the world in support of innovative efforts to develop, disseminate, and use knowledge to improve future wellbeing.
- With the transition of our signature tool,
 International Futures, to VB.NET completed,

- we were able to focus this year on improving model stability, fixing model problems, enhancing the user experience, and further development of substantive components of the model.
- Our first cohort of Pardee Fellows, a select group of graduate students, has completed the inaugural year of a program that involves them in our ongoing policy research, and we are preparing to welcome a new cohort to join them in the fall.

You will find information about each of these achievements in ensuing articles in this Annual Review. I hope you find them informative and enjoyable.

Before closing, I want to comment on the cover art we selected for this Annual Review. I grew up in a community where quilt-making had great significance. It brought people together

In all that we do, we strive to embody the theme that the quilt represents: Many parts, one whole.

to create something with shared value and practical utility. I think of our work that way, both its process and its outcomes. In all that we do, we strive to embody the theme that the quilt represents: Many parts, one whole.

I am privileged to be the Director of the Pardee Institute and enriched by my connections with all of you. Thank you for your continued support and collaboration. Together we are making strides toward a more informed, equitable, and sustainable future.



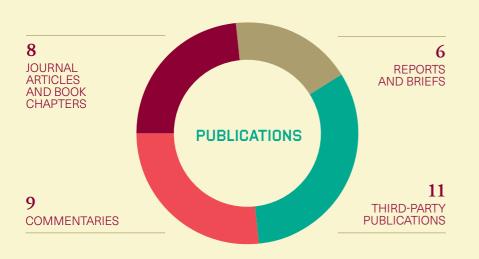


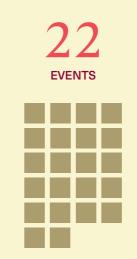
Pardee Institute UPDATES UPDATES

This section serves as an opportunity for us to provide a foundation for all that you will read in this year's Annual Review.

We begin with summary information about our personnel and activities over the past year and then introduce the core Pardee team. This section also features two of the topics highlighted in the Director's Letter. One is our formal recognition as a University of Denver research institute, a recognition that we celebrate and that positions us for further impact. The second focuses on concrete advances over the past year in creating an Institute environment that ensures the success of our team and our work.

PARDEE BY THE NUMBERS







\$1.6 M IN RESEARCH EXPENDITURES (JULY 2023–JUNE 2024)

COURSES
TAUGHT BY PARDEE
INSTITUTE FACULTY

COMMUNITY



15 CORE TEAM MEMBERS



63 STUDENT EMPLOYEES



11 CLIENTS

CORE PARDEE TEAM

As of end of 2023–2024 Academic Year



JANET R. DICKSON Senior Advisor Janet.Dickson@du.edu



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Data Operations
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JONATHAN MOYER, DIRECTOR OF THE PARDEE INSTITUTE

ANNUAL REVIEW 2023-2024

WE ARE NOW THE PARDEE INSTITUTE FOR INTERNATIONAL FUTURES



BY JANET DICKSON, PARDEE INSTITUTE SENIOR ADVISOR

In a book published in 1972 that remains a classic—Beyond Academic Departments: The Story of Institutes and Centers—Stanley Ikenberry notes the proliferation of centers and institutes in colleges and universities after World War II.

He emphasizes the important functions they fulfill with respect to interdisciplinary research and other activities that don't fit easily within traditional departmental structures. He also notes that centers and institutes are often not well integrated into the broader institutions of which they are a part and tend to operate on a more ad hoc basis. In fact, he notes that enterprising "scholar-entrepreneurs" often create a center or institute just by naming one!

Turn now to our home institution, the University of Denver (DU). Recognizing the importance of the work of centers and institutes, combined with concern for how they are governed and how they fit into the broader university, Corinne Lengsfeld, DU's Senior Vice Provost for Research and Graduate Education, recently led a process to establish policies for DU research units. This culminated in formal criteria for being recognized as an official University of Denver research center or institute.

The criteria distinguish between centers and institutes based on research volume and other contributions to the University, as well as on various aspects of governance and structure, with more stringent requirements to be designated an institute. To be recognized as a DU institute, the unit must have a three-to-five-year average of funded research exceeding \$1.5 million annually. It must also demonstrate its contributions to the fabric of the University through faculty and student involvement.

We engaged in a comprehensive application process for designation as a research institute in the inaugural application cycle this past fall. We are honored to be one of just six organized

"It means so much to have our work recognized in this way by our home institution."

JONATHAN MOYER

research units
across the University
to be officially
recognized as a DU
research institute in
this inaugural cycle.
Not only does this
designation formally
recognize the farreaching scope and
scale of our impact
on research and

scholarship in the DU community and beyond; it also effectively opens additional doors for opportunities to grow and expand our reach.

"It means so much to have our work recognized in this way by our home institution," notes Associate Professor Jonathan Moyer, who became the Pardee Center Director in 2016. "Our journey began over 45 years ago when Barry Hughes began developing the International Futures (IFs) computer simulation as an educational tool to help people think about long-term global futures. We were helped immensely by a series of generous gifts from Frederick S. Pardee and his estate that provided resources to establish the Center within the Korbel School for International Studies; allowed further development and use of IFs; and expanded the breadth, depth, and impact of our body of work."

"It's wonderful that we've arrived at this point," says Jonathan. "This recognition is the result of the hard work and commitment of so many people and so many things coming together. I hope the formal name change to the Pardee Institute for International Futures will remind us of all we've accomplished and spur us to further development and new achievements."

PARDEE INSTITUTE

DOWN TO BUSINESS

BY PAM HOBERMAN, DIRECTOR OF OPERATIONS

We aim to move good work forward, and positioning our employees for success is foundational to that effort.

This year we made significant, concrete strides to that end. Highlights include:

DAY-TO-DAY OPERATIONS: WELCOMING DÁMARIS ESCOBAR

- Dámaris joined as our Business Coordinator, handling payroll, employee transitions, AR/AP, inventory, facilities, travel, and communications.
- She also manages event coordination and our new employee newsletter.

CULTIVATING SUCCESS: EMPLOYEE POSITIONING AND INFRASTRUCTURE

- We standardized our onboarding and offboarding practices, including creating more touch points and devoting more resources to facilitate smooth personnel starts and transitions.
- We revamped meetings to enhance employee engagement, feedback, and alignment.
- We launched an internal newsletter to connect, celebrate contributions, and align on mission, vision, and values.

PROJECT MANAGEMENT: AN INSTITUTE-WIDE APPROACH

- We established a flexible project management infrastructure to serve the wide-ranging needs of our extensive research portfolio.
- We adopted practices that foster communication within and between project teams.
- New tools and practices empower effective project tracking, reporting, and resource management while building our institutional knowledge base.

"My job is to bring cohesion and provide foundational support for meeting the day-to-day needs of the Institute. As we continue to expand our reach as an Institute, I aim to be a bridge to the Institute's success and growth."

DÁMARIS ESCOBAR

ELEVATING MARKETING AND COMMUNICATIONS

- We made and strengthened connections with DU news and media channels to celebrate our contributions in research and broaden their reach to key constituents.
- We nearly doubled internal capacity to keep our website dynamic and informative. These efforts are currently underway, with changes scheduled to go live in the 2024–2025 academic year.
- Kathryn Handler, our highly capable and versatile Marketing and Communications Team Lead, who is also a DU undergrad majoring in International Studies, spearheaded this Annual Review while navigating Pardee through a school-wide website migration.

Beyond promoting operational excellence, these investments in our connections to each other and the work expand the scope of possibilities for where our research will take us next.



Our Current RESEARCH

Over the past year, we engaged in 21 research projects with 11 sponsors.

Our work continues to be organized across two substantive area teams—a sustainable development analysis team and a geopolitical analysis team—and is nurtured by ever-growing connections between them made possible by the work of our modeling team. For example, some of the work of the development analysis team this past year focused on informing and supporting global systems of cooperation and coordination, a focus made possible by the incorporation into IFs of data and tools produced by the geopolitical analysis team.

This was also a year of more general consolidation and enhancement in our modeling work following the migration of the International Futures underlying software system to VB.NET in summer 2023.





SUSTAINABLE DEVELOPMENT ANALYSIS

BY TAYLOR HANNA. ASSOCIATE DIRECTOR OF DEVELOPMENT ANALYSIS

The Sustainable Development Analysis team uses the International Futures (IFs) integrated assessment model and long-term systems thinking to better understand the future and to help our partners deal with complex development issues.

Sometimes our work focuses on a specific challenge in a single country or region, like exploring the importance of governance in Ethiopia or a renewable energy transition in the Sahel. We also grapple with big questions on a global scale.

Recent work with UNICEF is an example of our approach to global-scale big questions. We utilized scenario development and analysis to explore how changing patterns of technological development, climate change, and geopolitics might shape the future for the next generation. The path the world is on now we call *Divided Prosperity*, characterized by overall economic expansion and broad improvements in human development. However, these improvements are uneven, fail to meet key development targets, and come at the expense of the environment. While this future holds promise in technological and material improvements, a lack of global cooperation leaves millions behind and fails to address climate change.

We compare this scenario with three other possible futures: one in which technological improvements occur alongside improvements in international cooperation (*Global Synergies*); one in which cooperation is present but technological and economic progress fail to materialize (*Struggling Together*); and, finally, a future characterized by low improvements in technology and limited cooperation (*Fragmented World*).

This work, presented in UNICEF's Global Outlook 2024 report, highlights the importance and the challenge of shifting the global trajectory to cooperation to solve collective problems.

In fact, much of our team's work this past year focused on informing and supporting global systems of cooperation and coordination. With the African Union, we used IFs to support target-setting for the Second Ten-Year Implementation Plan of Agenda 2063, enabling ambitious continental coordination that accounts for challenging realities faced by many African countries. With UNDP Yemen, we explored potential impacts of climate change on human development in a country already devastated by war, highlighting the need for both climate change planning

and international support. Our involvement in UNEP's Global Environment Outlook is helping to shape the narrative around human development implications of transformational changes needed to address planetary crises. And in collaboration with the UN Secretary General's office, we are working to better understand global risks facing the multilateral system now and in the future.

Key personnel on the Sustainable Development Analysis team this past year included: Senior Research Associate Stellah Kwasi, who piloted our Pardee Fellowship program and provided crucial support to our African Union projects; and Deva Sahadevan, who played a key role in many UNDP and UNICEF projects, especially those forecasting energy transitions. Finally, we are thrilled to have hosted our first cohort of Pardee Fellows, a set of Korbel Master's students who are training in the IFs model and contributing to client work.

A full roster of projects and partners over the past year appears below. We look forward to continuing our efforts through current and new engagements in the years to come.

FIGURE 1 SUSTAINABLE DEVELOPMENT PROJECTS OVER THE PAST YEAR BY GEOGRAPHIC AREA, PARTNER, AND RESEARCH FOCUS





GEOPOLITICAL ANALYSIS

▶ BY COLLIN MEISEL, ASSOCIATE DIRECTOR OF GEOPOLITICAL ANALYSIS

Like our colleagues across the Pardee Institute, the Geopolitical Analysis team's broad objective is to connect various cross—cutting issues that characterize the international system to better understand that system.

With an emphasis on both long-term historical patterns as well as long-term forecasts, we seek to know where we as an international community are going by asking questions about where we have been. Our exploration often involves deeply complicated ontological questions of what "is" and equally challenging epistemological questions of whether, and how, we can know "it"—where "it" in our case involves diplomatic, economic, and security-related interactions and developments within and across countries.

Our team's Perceived Mass Atrocities Dataset (PMAD) is an effort that epitomizes these challenges. Built in support of the Elie Wiesel Genocide and Atrocities Prevention Act enacted by the U.S. Congress in 2018, PMAD seeks to quantify the scope and scale of recent and ongoing mass atrocities worldwide. We wrestle with questions of how to define atrocities and how to compare their scope and scale—comparisons across vastly different events in vastly different contexts—as transparently and ethically as possible. We also work to model the correlates of, and pathways to, mass atrocities, supporting others who are seeking to forecast or even prevent further atrocities—ultimately respecting the constraints of what we can know about such a complex collection of happenings.

by the U.S. State Department to the U.S. Congress in an annual hearing on human rights. We also provided PMAD to many scholars and practitioners, both directly and through a forthcoming publication in the Journal of Peace Research. Beyond their relevance to studies of conflict and human rights, the PMAD data and associated country case narratives will allow us and others to probe the relationship between atrocities and development, governance, and gender equality, among other topics. They also serve to expand conversations that are central to quantitative international studies—those that ask: What can we measure? How can we measure it? PMAD is just one way in which we are doing

This past summer, PMAD supported reporting

this. Other notable efforts include our Country and Organization Leader Travel (COLT) dataset, which catalogues all known overseas trips (now over 100,000) taken by every primary head of government or state from all countries from 1990 through the present. We also measure and track shifting patterns in geopolitical influence from the Cold War onward using our Formal Bilateral Influence Capacity (FBIC) Index—a measure which over the past year has been featured by The Economist, the BBC, and others. And we produce several data series tracking macro-level diplomatic interactions, one of the most widely used being the Diplometrics Diplomatic Representation (DDR) dataset, a dataset of diplomatic exchange via embassies that has supported reporting this past year by The New York Times, The Globe and Mail. and the Financial Times.

Figure 2 depicts how each of these and other geopolitical analysis initiatives connect with

our broader work here at the Pardee Institute. It offers a small taste of the depth, breadth, and cross-cutting nature of the research we and our colleagues across the Institute drive forward each year.

Over the past year, key personnel on our Geopolitical Analysis team included: Kylie McKee, who leads our COLT-related research and a team of more than two-dozen undergraduate and graduate research aides; Caleb Petry, who continues to further develop What can we measure? How can we measure it?

international relations forecasting abilities in the International Futures tool; and Adam Symanski-Burgos, who has spearheaded our

FBIC Index and DDR data development. Finally, we could not do our work without the legion of University of Denver students who support our research each day in ways both big and small.

FIGURE 2 CONCEPTUAL DIAGRAM OF THE PARDEE INSTITUTE'S GEOPOLITICAL ANALYSIS RESEARCH PORTFOLIO AND KEY DATA SERIES

DIPLOMACY DATA

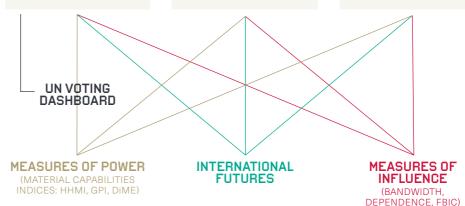
- Country Organization& Leader Travel
- Diplomatic Representation & Services
- International Organizations
- Multilateral Treaties
- UN Voting Patterns
- WTO Disputes, & More

ECONOMIC DATA

- ▶ Bilateral Trade & Tariffs
- FDI, Portfolio Investment, & Global Value Chains
- Foreign Aid & Remittances
- Multinational Enterprises
- ▶ Trade Agreement Index
- Trade Complimentary Index, & More

SECURITY DATA

- Arms Trade Stocks
- Military Equipment Index
- Perceived Mass Atrocities
- Total & Disaggregated Military Spending Stock, & More





MODEL DEVELOPMENT: FROM TRANSITION TO CONSOLIDATION

▶ BY JOSÉ SOLÓRZANO, LEAD SYSTEM DEVELOPER

The International Futures (IFs) integrated assessment model is foundational to the Institute's analysis of alternative global futures and to our support of such work by others around the world. Attention to it is always an Institute priority.

Just over a year ago, we completed a transition of the model's underlying software system from Visual Basic to VB.NET, a transition that was important for maintaining the long-term viability of IFs. With that transition complete, we focused this past year on fixing model problems and improving stability, even as we continued to enhance the model's substantive components. It was, as the title of this article suggests, a year of both consolidation and enhancement of IFs.

Some of the important updates and enhancements in the current version of the model (IFs 8.26) are briefly described below:

- Performance enhancements addressed multi-threading issues and numerous fixes were made to the Graphical User Interface (GUI) and underlying model to ensure a more stable and efficient platform.
- Updates to the Help system and a new GUI feature for clearing sessions have streamlined users' experiences.

- The constantly productive IFs data team both updated the data series used for initializing the model and added many new data series in support of Institute research projects.
- A transition from \$2011 to \$2017 constant dollars, coupled with rebasing to 2019, reflects our commitment to maintaining current and accurate economic data.
- Adjustments to economic growth projections for low-income countries and adoption of the World Bank's Poverty and Inequality Platform (PIP) for poverty data were undertaken to refine our economic analyses.
- Other important model enhancements included:
 - A new Polyarchy representation supplements, and largely supersedes, our earlier measure of democracy.
 - New age categories were added to refine our representation of fertility distributions.
 - Improvements were made in our representation of schooling and adult education attainment.
 - New parameters were introduced for intersectoral flows of trade, foreign aid, and other variables.
 - Basic packaged scenarios representing the Shared Socioeconomic Pathways were developed and are now being elaborated.

Foundations were laid for extending IFs forecasts to 2200, a project that is still underway.

In summary, while much will always remain to be done, our model work over the past year significantly broadens the possible scope and depth for our research. Our goal, as always, is to ensure that our forecasts and analyses remain robust and relevant in support of knowledge to improve the human condition.

Our work this year would not have been possible without the extensive model developments undertaken by Mohammod Irfan, Caleb Petry, and Barry Hughes, and the essential data work led by Yutang Xiong.

▼ Model Development Research Associate Caleb Petry at work.



Students in the PARDEE INSTITUT

This past year 63 University of Denver undergraduate and graduate students were employed by the Institute. Most were enrolled in the Korbel School of International Studies.

These students connected with us in a variety of roles. Five of them comprised the inaugural cohort in the Pardee Fellowship program mentioned in the Director's Letter. Three were administrative aides leading marketing and communications functions. Seven focused on data updates for our International Futures Tool. The remaining 48 were research aides on geopolitical analysis projects.

On the pages that follow, we first describe the Fellowship program. We then present the students who served as Project Leads for the geopolitical analysis teams and the marketing and communications team. We conclude with information about the external activities of many of these students this past year.



INAUGURAL FELLOWSHIP PROGRAM YEAR

BY STELLAH KWASI, SENIOR RESEARCH ASSOCIATE

The Pardee Institute's two-year Fellowship Program welcomed its inaugural cohort of five exceptional Fellows in the fall of 2023.

All five are highly capable master's-level students from the Korbel School of International Studies with a strong interest in quantitative long-term integrated assessment modeling, literature-based research, and policy-engaged analysis.

The activities of the Fellows are primarily focused on projects in the Institute's sustainable development analysis portfolio. Throughout the year, Fellows attended weekly trainings on the International Futures (IFs) model and then reinforced and applied their training in client-based project work. Their contributions to this work, in addition to being a learning process for them, have increased the Institute's capacity to support a range of projects focused on sustainable development.

During the past year, for example, the Fellows provided support for the UN's Global Risks report, which examines long-term risks to sustainable development over the next decade, and also for Yemen's Voluntary National Review, which reports on the country's efforts, progress, and challenges in implementing the Sustainable Development Goals. On the technical side, they downscaled regional forecasts to country-level values used in various scenarios for the Institute's contribution to the Global Environment Outlook (GEO-7) report and conducted work on estimation of functions involved in updating GDP per capita values in IFs from \$2011 to \$2017 constant dollars.

Additionally, four of the Fellows secured summer internships with two of the Pardee Institute's close working partners over the last decade, the Institute for Security Studies (ISS) Africa and the African Union Development Agency (AUDA-NEPAD). The experience the Fellows have gained over the past year will allow them to play even larger roles in IFs research and client projects in the future, as well as to provide mentorship to the incoming fall 2024 cohort.

MEET THE FELLOWS



ABDELRAHMAN
"BIDO" IBRAHIM
MA in International
Development
Bido is from Egypt.

He has a background in Politics. Political Science, International Business and Marketing, and International Relations. He has experience in research and coordination and has been involved in the Colombia Resume Experiment, where he supervises and trains a Colombian team. builds profiles for ex-combatants. and helps them apply for jobs. Additionally, he is a former Fellow at the United Nations Alliance of Civilizations and served as the Curator of the Global Shapers Community Alexandria Hub. Previously, he held significant roles as the Academic Coordinator at American School Wav in Colombia and the Public Relations Manager at Egyptian Canadian for Chemical Industries, Bido interned with AUDA-NEPAD in summer 2024.



SOLIKHAN "LIA"
MAKHMATOVA
MA in International
Development and
Certificate in Public

Diplomacy and National Branding

Lia is from Uzbekistan. Her background is in International **Development and Languages** (Translation). She is fluent in six languages: English, Italian, Russian, Tajik, Turkish, and Uzbek. She is the Social Chair at the Korbel School's online magazine. She has worked for USAID and with the communications team at Uzbekistan's international magazine to produce and disseminate reports and presentations. She is also a writer and has been a mentor for a memoir writing club hosted by American Councils for International Education. Lia interned remotely with the ISS in summer 2024.



MATTHEW
"MATT" SEVERS
MA in International
Security

Matt is from the United

States. He has a background in national security with over a decade of commissioned military experience. He works for the U.S. Army Reserve in Medical Operations where he manages planning processes and synchronizes operations of the largest medical brigade in the U.S. Army, consisting of multiple deployable hospitals and related medical units with over 2,000 assigned personnel.

Matt has also been stationed in many locations within and outside the U.S. throughout his career.



OMAR AITTAKALLA MA in International Development

Omar is from Morocco. His background is in

International Affairs and Business Management. He has lived and worked in Malaysia, the United Arab Emirates, and the U.S, where he has applied his interest in interdisciplinary research and contributed to scientific insights for global policy impact. In the UAE, Omar worked for Philip Morris as a Business Developer and as a Development Manager for Burberry, the largest flagship store in the Middle East and North Africa region. Omar also speaks Arabic and French fluently. Omar interned with AUDA-NEPAD and WorldDenver in summer 2024.



CLAYTON "CLAY"
MORGAN
MA in International
Studies

Clay Morgan is from the United States. They have a background in International Affairs and Economics. Prior to joining the Fellowship program, they worked as a Research Assistant at the Georgia Institute of Technology researching American historical public opinion on nuclear negotiations and proliferation and understanding the role of ontological security and cultural history in the formation of extremist nationalism. They have also been an organizer for a student-run international philanthropy organization focused on supporting local youth organizations in Latin America. Clay interned with the ISS in South Africa in summer 2024.

A COMMITMENT TO IMPACT

At the heart of the Fellowship Program lies the Institute's commitment to nurturing academic exploration, capacity building, and knowledge sharing to catalyze meaningful change. Selected for their diversity in knowledge, perspective, and expertise, our Fellows are the embodiment of these core values. Through their participation, they are poised to make significant impacts in their respective fields and will be instrumental in the mentorship of future cohorts. We celebrate the wide-ranging accomplishments of our inaugural cohort and look forward to welcoming the next cohort in Fall 2024: Julia Frangul, Helen Lee, Victoria Wiafe Pepera, and Fthan M. Sullivan.

Student Aide Project Leads

Project Leads are experienced student aides who have applied and been selected to serve in leadership roles with their peers at the Institute. This year, one led the Institute's marketing and communications team. The remainder were research aides who assisted in managing the work of geopolitical analysis project teams. The involvement of the Project Leads is central to the work of the Institute, and we are deeply appreciative of all that they do.



SKYLER WILKEY **MA International Security** PARDEE PROJECT: Country Organization Leader Travel Team (Europe cohort)



KATHRYN HANDLER **BA International Studies with** a Specialization in International **Peace and Security** PARDEE PROJECT: Marketing and Communications Team

INCOMING PROJECT LEADS, **SUMMER 2024**



AVANTIKA SINGH MA International Human Rights PARDEE PROJECT: Perceived Mass Atrocities Dataset Team



LUKE VENEZIA BA International Studies with a Specialization in International **Peace and Security** PARDEE PROJECT: Core Diplometrics Team



VINCENT ZILIAK **BA International Studies & MA** Global Economic Affairs PARDEE PROJECT: Country Organization Leader Travel Team (Europe cohort)



ANNA ZAPATA **BA Sociology & JD Candidate** PARDEE PROJECT: Country Organization Leader Travel Team (Asia, Oceania, & IGOs cohort)

GRADUATING PROJECT LEADS, SPRING 2024



PHOEBE FLIZABETH CRIBB

HOLLY RYAN

(Europe cohort)

MA Global Environmental Sustainability with a Specialization in Environmental, Social, and **Corporate Governance**

PARDEF PROJECT: Perceived Mass Atrocities Dataset Team and Country Organization Leader Travel Team

MA International Security with a

Certificate in Homeland Security

Organization Leader Travel Team

PARDEE PROJECT: Country



CONTINUING PROJECT LEADS, FALL 2024



LIAM CORSUN MA Global Economic Affairs PARDEE PROJECT: Country Organization Leader Travel Team (Africa and the Americas cohort)



PARDEE INSTITUTE

A Shout-Out to Pardee Aides and Fellows

As the Introduction to this section said, 63 University of Denver students were affiliated with the Pardee Institute as research aides, fellows, or administrative aides during the past year. Twenty-six of these students shared information with us about educational and professional activities beyond their DU coursework and their work with the Institute. Their achievements and activities—awards, internships, publications, teaching and research, participation in events, and study abroad—are impressive, and are presented below.

ANGELIKA ACHOY:

- ▶ Hispanic Scholarship Fund awardee
- Intern at the Department of State as a passport specialist
- Student volunteer at the Denver Democracy Summit hosted by the University of Denver

OMAR AITTAKALLA:

 Intern at the African Union Development Agency (AUDA-NEPAD) and also at WorldDenver

KELLY ATKINS:

- Teaching Assistant for an undergraduate course in global economic affairs
- Presented research at the University of Denver's 2024 Sustainable Development in Africa conference

JACKSON BERRIDGE:

- Urban Leaders Fellowship Awardee
- Intern at The Chicago Council on Global Affairs

TANIA BLANGA:

Intern at SafeAbroad

MÉLANIE CLERGEAU:

Intern at SafeAbroad

LIAM CORSUN:

Intern at Chatham Financial Corporation

PHOEBE CRIBB:

- Intern with the Sustainability Team at Denver International Airport
- Co-authored forthcoming article in the Journal of Peace Research entitled "Bearing witness: Introducing the Perceived Mass Atrocities Dataset (PMAD)"

ELIZA FOX:

 Studied abroad at the American Institute for Foreign Study (Salzburg, Austria)

LOGAN GAFNER:

- National Nuclear Security Administration Graduate Fellow awardee at Pacific Northwest National Laboratory
- Intern at the U.S. Army's Foreign Military Studies Office

GREGORY GILLEN:

Intern at the Rocky Mountain
 Employee Ownership Center



▲ Student Aides Daniel Cieraszynski and Regan Parish at a geopolitcal analysis meeting.

KATHRYN HANDLER:

Studied abroad at Institut Américain
 Universitaire (Aix-en-Provence, France)

MADELINE HARTY:

 Intern at the Department of the Army and also at the International Institute for Democracy and Electoral Assistance



▲ Pardee Fellows Matthew Severs and Omar Aittakalla sharing a light moment.

ABDELRAHMAN IBRAHIM:

 Intern at the African Union Development Agency (AUDA-NEPAD)

CLARISSA KRAMER:

- Graduate Fellowship awardee from the Nathanson Centre on Transnational Human Rights, Crime, and Security
- Intern at The Aspen Institute

EMMA LOEBER:

 Lead author of an article published in *DUURJ* (the DU Undergraduate Research Journal) entitled "Shaming women to shame men: A case study of the Houthis and the

- relationship between honor culture in Yemen and sexual violence against women in the Yemini civil war"
- Studied abroad at Lund University (Sweden)

SOLIKHA MAKHMATOVA:

 Intern at Institute for Security Studies headquartered in Pretoria, South Africa

ALEX MARSH:

 Intern at the Colorado Department of Transportation

AUSTIN MILD:

Intern at Enel X North America, Inc.

CLAYTON MORGAN:

 Intern at the Institute for Security Studies headquartered in Pretoria, South Africa

SYLVIA MORNA-FREITAS:

Intern at Science to Empower (s2e)

REGAN PARISH:

 Studied abroad at Cambridge University (United Kingdom)

AHMAD SALEEM:

 Intern at the Centre for Security, Strategy, and Policy Research in Lahore, Punjab and also at the U.S. Army War College

PATRICK SCHMIDT:

 Research Assistant for The National Security Institute at George Mason University

AYAM SHRESTHA:

- Graduate Fellowship awardee from the Nathanson Centre on Transnational Human Rights, Crime, and Security
- Intern at The Aspen Institute

LUKE VENEZIA:

- Fellowship awardee from the Stimson Center's Reimagining U.S. Grant Strategy Program and winner of its Build a Better U.S. Foreign Policy student essay competition (published on Inkstick Media)
- Intern at the University of Denver's Department of Enterprise Risk Management
- Studied abroad at John Cabot University (Rome)



Pardee in THE

We care not just about doing our work, but also about sharing it with others so that it might advance knowledge and inform policy strategies.

While much sharing occurs in the normal course of conducting our research, our participation in formal events and our publications are of critical importance.

In this section, we first summarize the formal events in which Pardee team members participated this year and then list our publications. Importantly, the list of publications includes a category called "Third Party Publications." These are articles and reports in which we did not participate as authors, but which used our data and/or tools as a foundational element. We celebrate this marker of our growing "reach."

PRESENTATIONS, CONFERENCES,

September 2023

Taylor Hanna participated in the Global Environment Outlook (GEO-7) series Second Policy and Outlooks Workshop and Author's Sprint hosted by Tongji University in Shanghai, China.



October 2023

Jonathan Moyer moderated an event evaluating climate change and democracies at the annual Denver Democracy Summit hosted by the Josef Korbel School of International Studies at the University of Denver.

November 2023

- Taylor Hanna, Collin Meisel, and Jonathan Moyer presented the Institute's work to Fellows from the Halifax Security Forum Peace for Women during their visit to the Josef Korbel School for International Studies.
- Mohammod Irfan and Caleb Petry presented at the Integrated Assessment Model Consortium annual meeting in Venice, Italy. Using the Pardee Institute's International Futures model, they analyzed education development trajectories and an approach to historical model validation.
- Jonathan Moyer virtually presented research on development and climate change to an Intergovernmental Panel on Climate Change-affiliated workshop hosted by SciencesPo, located in Paris, France. His research, which focuses on strategies for reducing carbon emission while promoting human development, was recently published in Scientific Reports.
- Speaking on a panel of experts hosted by the Stimson Center regarding the conflict in Gaza, Collin Meisel discussed opportunities to ease longstanding conflicts and provide a roadmap to a more peaceful and sustainable future in the Middle East.



MEETINGS, AND EVENTS



December 2023

Taylor Hanna launched and presented key insights from the report "The impact of climate change on human development in Yemen" at a meeting hosted at the Conference of Parties (COP28) United Nations Climate Change Conference in Dubai.

January 2024

- ▶ To continue drafting the seventh edition of the GEO-7 Report, contributing authors Taylor Hanna and Jonathan Moyer joined experts in Vienna, Austria. The Pardee Institute is supporting the GEO-7 effort with analysis from its International Futures tool.
- Taylor Hanna traveled to the United Nations Development Programme in Amman, Jordan to present the Institute's Yemen climate change report.



February 2024

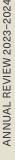
- Presenting virtually to attendees of the first session of the Asia-Pacific Regional Consultation on the Sixty-Eighth session of the Commission on the Status of Women, Taylor Hanna discussed gendered poverty. The event was hosted by UN Women.
- Collin Meisel visited CU Denver's Democracy Summit and presented his research on forecasting democracy across the Shared Socioeconomic Pathways using the International Futures model.

March 2024

Collin Meisel was invited to speak virtually to students of the U.S. Air Force Senior Non-Commissioned Officer Academy on the great power competition. He also led a professional development workshop for the participants.

April 2024

 Kylie McKee moderated two panels at the CU Boulder Conference on World Affairs. This event brings together experts from various career fields to take part in conversations about pressing global issues and events.



APRIL 2024 CONTINUED

- Taylor Hanna traveled to Addis Ababa, Ethiopia and led a scenario workshop for members of USAID Ethiopia to brainstorm innovative solutions to Ethiopian development challenges in support of the next Country Development Cooperation Strategy.
- Pardee Core Staff represented the Pardee Institute at the University of Denver's Denver Difference Community Launch to display the signature International Futures platform. The event celebrated DU's recent achievements and highlighted the University's future aspirations.
- ▶ The Pardee Institute hosted
 Drs. Fonteh Akum and Jakkie
 Cilliers from our long-time
 partner, the Institute for
 Security Studies, a pan-African
 organization focusing on
 enhancing human security for
 Africa's citizens. During their
 visit, the ISS team presented

- their analysis of Africa's energy demand and outlook, powered by the International Futures platform, to students and faculty members.
- Collin Meisel presented Pardee Institute research on South Asian geopolitical influence capacity at the University of Oklahoma's Annual Symposium hosted by the College of International Studies. The analysis utilized the Formal Bilateral Influence Capacity Index (FBIC) developed by the Pardee Institute.
- Collin Meisel attended a round table meeting in Washington, DC, co-hosted by Bridging the Gap, the United States Holocaust Memorial Museum, and Duke University. He discussed the Perceived Mass Atrocities Dataset (PMAD), which is meant to inform the policy-making community and provide insight into mass atrocities that often go undocumented.

June 2024

- Jonathan Moyer participated in a writer's workshop for an Elgar Handbook on Geopolitics and Sustainability in Marden, Sweden.
- ▶ Collin Meisel was named a Council on Foreign Relations Term Member, a program which provides young professionals the opportunity to participate in sustained conversation on international affairs and U.S. foreign policy across a five-year term.
- Taylor Hanna traveled to Addis Ababa, Ethiopia, to lead a second series of futures analysis workshops for USAID Ethiopia participants in support of the next Country Development Cooperation Strategy.

July 2024

Jonathan Moyer met with developers of the Asia-Pacific Integrated Model (AIM) to discuss modeling and collaboration at the University of Kyoto in Kyoto, Japan.





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PUBLICATIONS

September 2023-August 2024



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