FIGHT OR FLIGHT: EXAMINING ACADEMIC AIR TRAVEL’S CARBON FOOTPRINT

TESSA YIP

@tessayip

Host organization: UW Sustainability
Site supervisor: Elise Glassman, UW Sustainability
Faculty advisor: Kristi Straus, Program on the Environment
WHAT FACTORS AFFECT ACADEMIC AIR TRAVEL?
COMPARING TONS OF CARBON DIOXIDE

- 6.6 tons CO2 per house
- 4.76 tons CO2 per passenger
- 1.9 tons CO2 per car

- 1 roundtrip flight between Seattle and Delhi, India
- 1 year of electricity in the average U.S. home
- 1 year of commuting: 100 miles a week in a car
15 - 40% 

The predicted percentage of global carbon dioxide emissions to come from air travel by 2050
5.3%

Annual growth rate of all civilian air travel over the next decade
The extensive predicted growth in aviation will outgrow any increases in fuel efficiency.
11% The percentage of the UW's carbon footprint that comes from air travel.

2050 UW Climate Action Plan goal for climate neutrality.
INTERNSHIP AND INTERVIEWS

- Interned with UW Sustainability
- Analyzed Keystone Team's 2015-2016 research
- Developed communications plan for UW Travel Office
- Conducted interviews with 10 UW faculty members
WHERE DO PROFESSORS GO?
DIFFERENT SCALES OF ACADEMIA

- Academic System
- Universities
- Individual Academics
SCALE 1: THE GLOBAL ACADEMIC SYSTEM

Academic System

Universities

Individual Academics
THE GLOBAL ACADEMIC SYSTEM

TRAVEL TYPES
- Research
- Conferences
- Study abroad
- Teaching

ESSENTIAL AND INESSENTIAL
Travel types range in importance
SCALE 2: THE UNIVERSITY SYSTEM

Academic System

Universities

Individual Academics
THE UNIVERSITY SYSTEM

CAREER PROGRESSION
Career progression is vital to an academic’s career

TENURE
Tenure and seniority give greater freedom of choice regarding travel

ACADEMIC DEPARTMENTS
Travel requirements range between each department
SCALE 3: INDIVIDUAL ACADEMICS

Academic System

Universities

Individual Academics
CATEGORIZING PROFESSORS BASED ON TRAVEL IDEOLOGY

- Shift in air travel habits
- Environmental awareness
- Perception of air travel
- Openness to alternatives
IDEOLOGY SCALE - "TYPE"

Value-Driven

Rationalizer

20%

60%

20%

Trailblazer
HOW CAN A UNIVERSITY MITIGATE THE ENVIRONMENTAL IMPACTS?
REDUCE ACADEMIC AIR TRAVEL

Cutting academic travel would be the **most efficient action** to reduce UW's **carbon footprint** but would this impede the university's mission?

“ACADEMICS HAVE A DUTY TO DISCUSS, DISSEMINATE, DEFEND THEIR WORK, AND LEARN ABOUT OTHER APPROACHES TO THE SAME PROBLEMS AND QUESTIONS.”

- Jeremy Hess, Emergency Medicine, Health Sciences, Global Health
STREAMLINE ACADEMIC TRAVEL

Better organize and schedule travel

Coordinate travel with other kinds of travel

Reduce the "back and forth"

Maximum amount is done with 1 round-trip flight
DO I GO?

Is the conference over 300 miles away?

Yes: Does it require more than one flight?

Yes: Is it essential to my work?

Yes: Go!

No: Are there more worthwhile conferences I plan to attend this year?

Yes: Skip this conference

No: Will attending benefit my work and my colleagues?

Yes: Skip this conference

No: Go!
LET'S MAKE AIR TRAVEL PART OF THE CARBON CONVERSATION

Talk about flying with colleagues

Keep personal emissions record

Make flying part of the study abroad curriculum
“If we look at sustainability as 'doing less bad' then our endgame is doing nothing; the endgame is to do good.”

- Stephen Muench, Civil and Environmental Engineering
START WITH CONFERENCES

World Seabird Twitter Conference
“How do we use the existing resources of a totally unsustainable culture to leverage them in a direction of something that’s viable for the future?”
- Karen Litfin, Political Science
ACKNOWLEDGEMENTS

Site Supervisor: Elise Glassman
Faculty Advisor: Kristi Straus
My parents, friends, and girlfriend
Fellow PoEple