

KATJA BRUNDIERS, PH.D.

Clinical Assistant Professor

Arizona State University / College of Global Futures / School of Sustainability – Tempe, AZ, USA
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Guest Professor

Center for Global Sustainability and Cultural Transformation
Leuphana University of Lüneburg, Germany

OVERVIEW

Research	Disasters as opportunities for change towards sustainability Sustainability education, project-based pedagogies, transdisciplinary research collaboration
Teaching	Professional skills in sustainability, solutions-oriented sustainability research design Disaster recovery, sustainability transition and transformation, resilience Coaching of student teams in applied sustainability projects
Service	Local governance initiatives on sustainability, resilience and emergency management Key competencies in sustainability in higher education initiatives Training for teaching and learning in applied sustainability projects

EDUCATION

2011 - 2016	Doctorate in Sustainability (Ph.D.), School of Sustainability, Arizona State University Doctoral thesis on “Disasters as Opportunities for Change Towards Sustainability” (field work in Indonesia and New Zealand)
1995 - 2003	Master of Arts (M.A.) in Geography, University of Zurich, Switzerland; guest semesters at the University of Sheffield (UK) and Humboldt University of Berlin (Germany) Master thesis on “Housing Policy in Lebanon and its Relation to Processes of Integration and Segregation: The Case of the Maronite Church and the Hizballah” (field work in Lebanon)

EMPLOYMENT

2019 – present	Clinical Assistant Professor , School of Sustainability, Arizona State University, ASU, Tempe, USA
2017 – present	Senior Sustainability Scientist , The Global Institute of Sustainability and Innovation, ASU
2017 – present	Guest Professor , Leuphana University of Lüneburg, Germany
2018	Guest Professor , Utrecht University, Utrecht, Netherlands (February to June)
2017 – 2019	Assistant Research Professor , School of Sustainability, Arizona State University, Tempe, USA
2011 – 2016	Academic Professional (Community-University Liaison) at the School of Sustainability, ASU
2009 – 2011	Academic Professional (Community-University Liaison) at ASU’s Decision Center for a Desert City and the School of Sustainability
2008	Consultant to <i>seed sustainability</i> and to the University of British Columbia, Vancouver, Canada
2006 – 2007	Head of <i>seed sustainability</i> ; now <i>Sustainability at ETH</i> at the Swiss Federal Institute of Technology (ETH) Zurich, Switzerland
2004 – 2007	Consultant at <i>Kontur Project Management AG</i> , Berne, Switzerland
2003	Civil servant at the Swiss Federal Office of Spatial Development in Berne, Switzerland

- Holladay, P., Méndez Lázaro, & **Brundiers**, K. (2021, in press). From hurricanes to pandemics: community-based transformation and destination resilience in Utuado, Puerto Rico. *Journal of Sustainability and Resilience*.
- Bhagavathula, S., **Brundiers**, K., Stauffacher, M. & Kay, B. (2021, in press). Fostering collaboration in city governments' sustainability, emergency management and resilience work through competency-based capacity building. *International Journal of Disaster Risk Reduction*.
- Brundiers**, K., Barth, M., Cebrián Bernat, G., Cohen, M., Diaz, L., et al. (2021). Key competencies in sustainability in higher education – towards an agreed-upon reference framework. *Sustainability Science*, 16, 13–29.
- Brundiers**, K. (2020). Leveraging disasters for sustainable development. *Environment: Science and Policy for Sustainable Development*, 62(1), 15-27.
- Kittipongvises, S, Phetrak, A., Rattanpun, P., **Brundiers**, K., Buizer, J. L., & Melnick, R. (2020). AHP-GIS analysis for flood hazard assessment of the communities nearby the world heritage site on Ayutthaya Island, Thailand. *International Journal of Disaster Risk Reduction*, 48, 101612.
- Holladay, P., Méndez Lázaro, P., Marin Centeno, H., Rivera-Gutierrez, R., Adams, K., & **Brundiers**, K. (2019). Utuado, Puerto Rico and community resilience post-Hurricane Maria: the case of Tetuan Reborn. *Recreation, Parks, and Tourism in Public Health*, 3, 5-16.
- Brundiers**, K., & H.C. Eakin (2018). Leveraging post-disaster windows of opportunities for change towards sustainability – a framework. *Sustainability*, 10(5), 1390.
- Brundiers**, K. (2018). Educating for post-disaster sustainability efforts. *International Journal of Disaster Risk Reduction*, 27, 406-414.
- Brundiers**, K. (2018). Disasters as opportunities for sustainability – the case of Christchurch, New Zealand. *Sustainability Science*, 13(4), 1075–1091.
- Brundiers**, K., & Wiek, A. (2017). Beyond interpersonal competence – teaching and learning professional skills in sustainability. *Education Sciences*, 7(1), Art. 39.
- Bernstein, MJ., Wiek, A., **Brundiers**, K., Pearson, K., Minowitz, A., Kay, B., Golub, A. (2016). Community-based tree and shade intervention in a low-income neighborhood in Phoenix, AZ. *Local Environment*, 21(4), 414-431.
- Wiek, A., Xiong, A., **Brundiers**, K., & van der Leeuw, S. (2014). Integrating problem- and project-based learning into sustainability programs – a case study on the School of Sustainability at Arizona State University. *International Journal for Sustainability in Higher Education*, 15(4), 431-449.
- Brundiers**, K., Wiek, A., & Kay, B. (2013). The role of transacademic interface managers in transformational sustainability research and education. *Sustainability*, 5(11), 4614-4636.
- Brundiers**, K., & Wiek, A. (2013). Do we teach what we preach? An international comparison of problem- and project-based learning courses in sustainability. *Sustainability*, 5(4), 1725-1746.
- Brundiers**, K., & Wiek, A. (2011). Educating students in real-world sustainability research: vision and implementation. *Innovative Higher Education*, 36(2), 107-124.
- Brundiers**, K., Wiek, A. & Redman, C.L. (2010). Real-world learning opportunities in sustainability: from classroom into the real world. *International Journal of Sustainability in Higher Education*, 11(4), 308-324.
- Wiek, A., Ries, R., Thabrew, L., **Brundiers**, K., & Wickramasinghe, A. (2010). Challenges of sustainable recovery processes in tsunami-affected communities. *Disaster Prevention & Management*, 19(4), 423-437.
- Brundiers**, K. & Odermatt, A. (2002). Analyzing social spatial processes of integration and disintegration by examining the local housing market: A case study of Beirut, Lebanon. *The Arab World Geographer*, 5(4), 209-231.

BOOK CHAPTERS

- Michels, J., **Brundiers**, K., Redman, A., Barth, M., Fischer, D., Redman, A., Mochizuki, Y. & Zint, M. (2021, in press). Sustainability Competencies in Higher Education, Encyclopedia, Berkshire Publishing.
- Brundiers**, K. (2018). *Seizing Opportunities for Change Towards Sustainability During Disaster Recovery – The Case of Aceh, Indonesia*. In D. Paton & S. Sagala (Eds.), *Disaster Risk Reduction in Indonesia: Environmental, Social and Cultural Aspects*. (217-242). Springfield, IL: Charles C Thomas Publisher.
- Brundiers**, K., Savage, E., Mannell, S., Lang, D., & Wiek, A. (2014). *Educating Sustainability Change Agents by Design: Appraisals of the Transformative Role of Higher Education*. In Z. Fadeeva, L. Galkute, C. Mader and G Scott (Eds): *Sustainable Development and Quality Assurance in Higher Education: Transformation of Learning and Society* (196-229); New York, NY: Palgrave Macmillan.

BOOKS AND REPORTS

- Gerber, B., Gall, M., Hondula, D., & **Brundiers**, K. Eds. (2021, forthcoming). *Grand Research Challenges for Disasters and Disaster Science*; World Scientific Publishing Co Pte Ltd.
- Vidaure, M., **Brundiers**, K., Eakin, H. (2021). *Reviewing The Role of the Tempe Community Council (TCC) Within Participatory Budgeting*; report prepared for and in collaboration with the City of Tempe; School of Sustainability, College of Global Futures, Arizona State University
- Brundiers**, K., & Wiek, A. (2021, in prep). *Professional Skills for Sustainability – An Introduction to Communication, Teamwork, Project Management, Stakeholder Engagement, Self-Management, and Continuous Learning*. In Collaboration with Braden Kay and Tamsin Foucrier. School of Sustainability, Arizona State University, Tempe, AZ.
- Gilbertson, P., **Brundiers**, K., & B. Kay (2019). *A Community Resilience Approach to Emergency Management*. Report prepared for the City of Tempe, AZ, USA.
- Beaudoin, F., & **Brundiers**, K. (2017). *A Guide for Applied Sustainability Learning Projects: Advancing Sustainability Outcomes on Campus and in the Community*. Philadelphia: Association for the Advancement of Sustainability in Higher Education (AASHE).
- Brundiers**, K. (2016) *Disasters as Opportunities for Change Towards Sustainability*. Dissertation. Arizona State University, Tempe, USA.

MEDIA COVERAGE OF RESEARCH ACTIVITIES

- Rodrigues, M. (April 22, 2021). *Puerto Rico Adapts to a Changing, Challenging Environment*. EOS Magazine – Science News by AGU. <https://eos.org/articles/puerto-rico-adapts-to-a-changing-challenging-environment>
- Pierre-Louis, K., (Feb 26, 2019). *Extreme Weather Can Feel ‘Normal’*. The New York Times. <https://www.nytimes.com/2019/02/26/climate/what-is-extreme-weather.html>

CREATIVE PRODUCTS: WEBSITES

- Real-World Learning Experiences:** This website empowers instructors to bring Real-World Learning Experiences into their own classroom. <https://schoolofsustainability.asu.edu/real-world-learning/>
- Sustainability Connect:** This website offers a market place to connect ASU students to sustainability projects, creating ASU-community collaborations that educate students and contribute to sustainability solutions. <https://sustainabilityconnect.asu.edu/>

PROJECT GRANTS

Cool Kids, Cool Places, Cool Futures: Community-based, arts-enhanced, and youth-focused approach for equitable urban cooling and emergency management. In collaboration with City of Tempe (Braden Kay, PI), AZ and Arizona State University, Paul Coseo (Co-PI), Katja Brundiers (Co-PI) and various other city-staff and ASU scholars. Robert Wood Johnson Foundation, Award: \$584,886. 2020-2023.

Exploring agritourism to increase agricultural sustainability and resilience in the municipality of Utuado, Puerto Rico. In collaboration with Troy University, Patrick J. Holladay (PI); University of Puerto Rico, Pablo A. Méndez Lázaro (Co-PI); Arizona State University, Katja Brundiers (Co-PI); collaborators: six local farmers, one community organization, and the Puerto Rico Tourism Company. USDA Sustainable Agriculture Education and Research, Award: \$300,000. 2020-2023.

Heat Maps for Decision-Making in Tempe. In collaboration with Braden Kay (PI), Paul Coseo (Co-PI), Katja Brundiers (Co-PI); Collaborators: Jennifer Vanos, Ariane Middel, David Hondula; Healthy Urban Environments (HUE), Arizona State University, Tempe. Award: \$25,000. 2020-2021.

Developing Consensus on Program-Level Learning Outcomes Related to Key Competencies in Sustainability in Higher Education (Delphi Study). National Council for Science and the Environment. School of Sustainability, Arizona State University, Tempe. Award: \$3,000. 2018-2020.

Leveraging Disasters for Scaling Glocal Sustainable Food-Energy-Water Solutions: Reviving Sustainable Rural Agricultural Communities in Puerto Rico. Katja Brundiers (PI), in collaboration with King's College London (Co-PI: Helen Adams and Sophie Blackburn (Co-PIs) and Autonomous University of Mexico: Pablo Jaramillo López, Carlos Gonzalez Esquivel (Co-PIs)). Global Consortium for Sustainability Outcomes. Award: \$9,935. 2018-2019.

Transforming University Engagement In Pre- and Post-Disaster Environments: Lessons from Puerto Rico; Conference participation as member of the conference steering committee, representing Arizona State University; Barrett Honors College, Honors Faculty Professional Development, Arizona State University, Award: \$1,500, 2019.

Agritourism for socio-economic development and resilience, Utuado, Puerto Rico; Summer Research Grant, School of Sustainability, Arizona State University Award: \$2,000. 2019.

Community-based Integrated Planning for Sustainable Reconstruction of Tsunami-affected Regions in Sri Lanka; coordinated by Arnim Wiek (PI), Swiss Federal Institute of Technology (ETH) Zurich, commissioned by the German Association for International Development (GIZ), Katja Brundiers (Co-PI). Award: \$50,000. 2005-2006.

OTHER RESEARCH PROJECTS

ASU Campus as a Sustainable Consumption Lab: Online Training Program; In collaboration with Daniel Fischer (PI), Katja Brundiers (co-PI), Jordan King (co-PI). Incentive for Incorporating Sustainability into the Curriculum, Arizona State University Sustainability Initiatives Revolving Fund, Award: 4,899. 2020-2021.

Local Government and Emergency Management, Sustainability and Resilience. In collaboration with ASU's School of Geographical Sciences & Urban Planning and the Department of Sustainability, City of Tempe, AZ. 2018-2020.

Disasters as Opportunities for Change Towards Sustainability, fieldwork in Indonesia and New Zealand. 2014-2016.

Community-Based Tree and Shade Intervention in a Low-Income Neighborhood in Phoenix, AZ. In collaboration with City of Phoenix and Sky Harbor Neighborhood Association. 2012.

An Integrated Approach for Sustainable Water Resources Management. In collaboration with Instituto Tecnológico de Monterrey, Mexico, and regional water agencies in Arizona. 2010-2011.

Planning for Climate Change Through an Integrative Approach to Water-Planning, Climate Downscaling, and Robust Decision-Making. In collaboration with University of Arizona and water managers from the metropolitan Phoenix area. 2009-2010.

TEACHING

SOS232 Professional Skills in Sustainability: in person & online, 3 CP, mandatory undergraduate course.

SOS598 Disasters as Opportunity for Sustainability: online, 3 CP, graduate course

SOS558 Perspectives in Global Sustainability Science: in person, 1 CP, graduate course

Graduate Reading & Conference

Sustainability Undergraduate Research Experiences (SURE Program), Honors Thesis

Previous Courses

- SOS598/494 Special Topics: Sustainable Mobile Solutions: Netherlands,
 - Pre-Departure Seminar (Spring 2014)
 - Study Abroad Course (Summer 2014)
- SOS598/494 Special Topics: Transformative Sustainability Seminar (Fall 2012)
- SOS598 Special Topic: Proposal Preparation Seminar (Spring 2011, Spring 2012)
- SOS594/494 Special Topics: Workshop on Urban Composting Systems (Spring 2011)
- SOS484 Internship: DCDC Integrating Science and Practice (Spring 2011)
- SOS494 Community of Undergraduate Research Scholars (Spring 2010)
- SOS591 Community of Graduate Scholars (CGS) – 1 CP (Spring 2010)
- SOS494 Community of Undergraduate Research Scholars (Fall 2009)
- SOS591 Community of Graduate Scholars (CGS) – 1 CP (Fall 2009)

CURRICULUM & ACADEMIC PROGRAM DEVELOPMENT

2020-2021: Graduate Certificate Program on Disaster Risk Management & Sustainability Transitions, partnership between the School of Sustainability, College of Global Futures and the Center for Emergency Management and Homeland Security, Watts College of Public Service & Community Solutions.

2010-2011: Internship for Science-Practice Integration in Water Management & Sustainability, offered through a partnership between the Decision Center for a Desert City and the School of Sustainability

2011-2012: Global Certificate in Sustainability Leadership for the US Army and Army National Guard

MENTORING (COMMITTEE MEMBER)

Jordan King, doctoral student, School of Sustainability, 2019-2023 (planned); dissertation working title: *"Deliberating practical and theoretical approaches to sustainability competency assessment"*.

Glorynel Ojeda-Matos, doctoral student, School of Sustainability, 2018-2022 (planned); dissertation working title: *"Risk-informed sustainability governance of the water-energy-food nexus"*

Susila Bhagavathula, master student, Swiss Federal Institute of Technology (ETH Zurich), 2018-2020; master thesis on *"Integrating key competencies in sustainability, emergency management and resilience into a capacity building program for local governments"*

Jessica Ortiz, master student, School of Sustainability, 2017-2019; master thesis on *"Social contracts, resilience and adaptive capacity: a case study of Post-Hurricane Maria Puerto Rico."*

Global Council for Science and the Environment Graduate Research Fellows

- Jordan King (2019-present)
- Jacqueline Kolb (2019-2021)

Graduate and Undergraduate Student Assistants

- **Huda Khalife**, master student, School of Sustainability, 2020-2021; Project “Exploring agritourism to increase agricultural sustainability and resilience in the municipality of Utuado, Puerto Rico”, USDA Southern Sustainability Agriculture Research & Education (SSARE)
- **Interdisciplinary student team**, 2019-2020; Project “[The Sustainability Review – an online student journal](#)”
 - **Kathryn Blaha**, undergraduate student, School of Sustainability, Editor
 - **Davis Keeter**, undergraduate student, School of Human Communication, Social media producer
 - **Niveditha Muthukrishna**, PhD student, Center for Adaptive Neural Systems, Videographer
 - **Pratima Tatikonda**, master student, The Design School, Graphic designer
 - **Andrew Kennedy**, Barrett Honors college, School of Sustainability, Photographer
 - **Amelia Kovacs**, Barrett Honors College, Conservation Biology, Podcaster
- **Bailey Howard**, undergraduate student, School of Sustainability, 2018-2019; Project “Leveraging Disasters for Scaling Glocal Sustainable Food-Energy-Water Solutions: Reviving Sustainable Rural Agricultural Communities in Puerto Rico”.

SERVICE

- 2021 – 2022 College of Global Futures: Faculty Advisory Committee
- 2019- 2022 School of Sustainability: Masters of Sustainable Solutions Committee
- 2021 – 2021 School of Sustainability: Ad-hoc Committee on Promotion Guidelines for Fixed Term Faculty
- 2019 – 2021 School of Sustainability: Barrett Honors Faculty Advisor
- 2019 – present Co-founder of the *Regional Center of Expertise Greater Phoenix*, a multi-stakeholder partnership between Mary Lou Fulton Teachers College, School of Sustainability and the Knowledge Exchange for Resilience, as well as community-based organizations and member of the global network on Regional Centre of Expertise (RCE) on Education for Sustainable Development (ESD), sponsored through the UNESCO
- 2017 – present Co-chair Community of Practice on Sustainability Education for the Global Council for Science and the Environment; co-lead of the initiative “A Pathway Towards Accreditation of Sustainability and Sustainability-Related Programs in Higher Education”
- 2019 – present Co-lead of the ASU interdisciplinary working group on Disaster Science & Sustainability Transitions
- 2019 – present School of Sustainability: Sustainability faculty chair, Sustainability Commission, City of Tempe, AZ

AWARDS

- 2017 Campus Sustainability Research Award granted by the Association of the Advancement of Sustainability in Higher Education (AASHE) for: **Brundiers, K., & Wiek, A.** (2017). Beyond interpersonal competence – Teaching and learning professional skills in sustainability. *Education Sciences*, vol. 7, no. 1, Art. 39.
- 2015 Outstanding Paper Award, Emerald Literati Network for: Wiek, A., Xiong, A., **Brundiers, K., & van der Leeuw, S.** (2014). Integrating problem- and project-based learning into sustainability programs – A case study on the School of Sustainability at Arizona State University. *International Journal for Sustainability in Higher Education*, vol. 15, no. 4, pp. 431-449.
- 2013 Dean’s Award for Excellence in Service and Leadership in the areas of community-university interactions and problem- and project-based learning in sustainability science education
- 2011 Arizona State University Sun Devils' Advocates Apple Polisher award for teaching
- 2009 President Award for Sustainability, Arizona State University (team led by Dr. Rimjhim Aggarwal)

SELECT WORKSHOP ORGANIZATION AND FACILITATION

Brundiers, K., Gilbertson, P., Gall, M., & Gerber, B. (2019-2020). Local Government and Emergency Management, Sustainability and Resilience. *Panel Discussion Series Center for Emergency Management and Homeland Security & Sustainable Cities Network*, Arizona State University.

Brundiers, K., & Wiek, A., (2018). Workshop on Transacademic Interface Managers (TIMs): “TIMs Facilitating Transdisciplinary Sustainability Research” Inc Garage, Utrecht, NL, June 12.

Parnell, R., Feldman, I. & **Brundiers, K. (2018).** Key Competencies in Sustainability: Curriculum and Program Development. *AASHE Conference*, Pittsburgh, PA, Oct. 2-5.

Beaudoin, F., & **Brundiers, K. (2018).** Applied Learning: Interventions for Sustainability Impacts. *AASHE Conference*, Pittsburgh, PA, Oct. 2-5.

INVITED PRESENTATIONS

October 13-14, 2021: Keynote on “*Sustainability Research and Practice*” at the biannual N2 Network Conference hosted jointly by Max Planck Phdnet, Helmholtz Juniors, and Leibniz PhD Network.

October 4, 2021: Participant at the tdAcademy: Expert workshop on “*Capacity building for transdisciplinary research: Current state, challenges, and future directions*”

May 19, 2021: Keynote at the UNESCO World Conference for Education for Sustainable Development (ESD), May 17-19, 2021; Session 12. Putting ESD Into Action: Part B: ESD in Higher Education.

April 7, 2021: Participation in expert workshop on *A European Competence Framework on Education for Sustainability*.

REVIEWS

- Current Opinion in Environmental Sustainability
- Education Policy Analysis Archives
- Environmental Innovation and Societal Transitions
- Environmental Sociology
- GAIA – Ecological Perspectives for Science and Society
- International Journal of Cleaner Production
- International Journal for Disaster Risk Reduction
- International Journal for Sustainability in Higher Education
- Sustainability
- Sustainability Science