FABRICE GILLES RENAUD

School of Social and Environmental Sustainability, The University of Glasgow,
Dumfries Campus, Rutherford/McCowan Building,
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EDUCATION

PhD in Crop, Soil, and Environmental Sciences (Soil Physics) *Outstanding PhD student in the department, University of Arkansas, 2000*	University of Arkansas , Fayetteville, USA **PhD** Dissertation: *Water and heat transfer in a soil cropped to rice*	1996-2000
MSc in Agricultural Engineering (Soil Conservation)	Cranfield Institute of Technology (now Cranfield University), Silsoe, UK MSc Thesis: Attempt to use the European Soil Erosion Model for a tropical environment	1991-1992
Diplôme d'Études Supérieures des Techniques d'Outre-Mer in Tropical Agro-economy (Land Management)	Institut Supérieur Technique d'Outre-Mer, Le Havre, France Mémoire de Fin d'Étude : *Évaluation de l'impact de trois procédés d'assainissement sur le comportement hydrique de la canne à sucre en sols argileux gonflants hydromorphes de Guadeloupe*	1987-1991

PROFESSIONAL POSITIONS

2022-	Head of the School of Social and Environmental Sustainability, College of Social Sciences, **University of Glasgow**	Dumfries, Scotland, UK
2018-	Professor of **Environmental Risk and Community Resilience** Social and Environmental Sustainability, College of Social Sciences, **University of Glasgow** · Zone 2 • Deputy Head of School (11/2020 – 07/2022) • Director of Research for the School (08/2020 – 07/2022) • Research Director, National Centre for Resilience (NCR) (08/2018 – 07/2022) and Chair of the Steering Group (09/2020 – 07/2022)	Dumfries, Scotland, UK
2007-2017	Head of the Environmental Vulnerability and Ecosystem Services Section **United Nations University** – Institute for Environment and Human Security (UNU-EHS) - P4 Grade	Bonn, Germany and Jakarta, Indonesia (2013-2015)
2009–2011	Director *ad interim* **United Nations University** – Institute for Environment and Human Security (UNU-EHS) – Temporary D1 Grade	Bonn, Germany
2004–2007	Scientific Advisor/Academic Officer **United Nations University** – Institute for Environment and Human Security (UNU-EHS)	Bonn, Germany
2001–2004	Research Officer and subsequently Lecturer (towards the end of appointment)	Silsoe, UK

	Cranfield Centre for EcoChemistry, **Cranfield University**	
1996–2000	Research Specialist and PhD Candidate Department of Crop, Soil and Environmental Sciences, **University of Arkansas**	Fayetteville, AR, USA
1994–1996	Associate Expert **International Board for Soil Research and Management** (IBSRAM)	Bangkok, Thailand
1992–1994	Volontaire du Service National **Franco-Namibian Rural Development Project**	Oshakati, Namibia

Roles and Responsibilities

Research Interests and Activities

- Strong publication record as lead author or co-author in peer-reviewed scientific journals, books, book chapters and policy briefs (see Annex 1).
- Successfully secured funding for new research projects from third party donors (see Annex 2).
- Since joining the University of Glasgow, I have developed international research projects around two major, inter-related themes. (1) Vulnerability, risk and resilience assessment of social-ecological systems exposed to natural hazards. mainly address hydro meteorological hazards, focus on nature-based solutions, and work in coastal and delta systems; (2) Sustainable development issues, particularly in the context of global environmental change.
- University of Glasgow: Secured four large projects under these themes with funding coming from the European Commission and UKRI. I am PI on two of these projects and Co-I with major roles (work package leader) in the other two projects. My research covers the following regions: Scotland, Europe, and South, Southeast, and East Asia
- 2004-2017 at UNU-EHS: Implementation of research projects on two major themes: the environmental dimension of vulnerability and risk, particularly in coastal and deltaic environments, and the links between human activities, water pollution, and the risks these pose to ecosystems and human health. Projects on these themes were implemented worldwide (e.g. West Africa, Viet Nam, Central Asia, Germany, Russia, Sri Lanka, and Indonesia)
- 2000-2004 at Cranfield University. Development, coding and parameterisation of various pesticide fate models, as well as associated laboratory, semi-field and field experiments.
- 1996-2000 at the University of Arkansas. Characterisation and modelling of water and heat transfer and study of soil physical properties in rice cultivation.
- 1992-1996: Farming systems surveys, financial cost benefit analyses and other studies relating to issues of deforestation, soil fertility, soil erosion and conservation in Thailand (IBSRAM) and Namibia (Franco-Namibian Rural Development Project).

Teaching and Supervision

- Lecturing at BSc and MSc levels at the University of Glasgow:
  - Since 2022: Developed and Convene DUMF513B: Theories, Practice and Policies in Environmental Risk and Management
  - 2018-2022: Convener of DUMF5116: Understanding Changing Environments (taught at Nankai University)
  - 2018-2021: Convener of the Environmental Science MSc Programme of the University of Glasgow – Nankai University (China) Joint Graduate School
  - 2018-2020. Convener of DUMF4040: Environmental Policy and Management
  - I also contribute to other courses: DUMF3007P, DUMF4008P, and supervise MSc students in the Environmental Science MSc of the Joint Graduate School
- I lead the development of a new PGT course "Environmental Risk Management" which was launched in September 2021 (University of Glasgow)
- 2017 – present: Guest-lecturing at the University of the Free State in South Africa (video-link) where I am also Affiliated Associate Professor.
- 2013-2017: Lecturing at MSc level in the joint UNU-EHS/University of Bonn MSc Programme *Geography of Environmental Risks and Human Security*. I was responsible for the module *Ecosystems and ecosystem services in the context of disaster risk reduction & climate change*

adaptation and the scientific writing section of the module *Professional intercultural communication, presentation and scientific writing skills.*

- 2005-2017: Guest-lecturing at the University of Bonn and at other universities and contributing to most of UNU-EHS' training programmes, notably at the University of the Free State in South Africa.
- 1997-2000: Lecturing in Soil Physics at graduate and undergraduate levels (University of Arkansas)

- I currently am first supervisor of 5 PhD Students and co-supervisor of three more (University of Glasgow)
- 2005-2017: Supervising PhD, MSc, and BSc students. While at UNU-EHS I was officially 2nd or 3rd PhD supervisor through the Faculty of Agriculture of the University of Bonn, Germany from 2012 to 2018 (see Annex 3 for a list of supervised students and topics)

MANAGEMENT AND ADMINISTRATION

- **University of Glasgow:** Developed relatively rapidly a team of 10 researchers with, in addition to myself, 3 PDRAs and 6 PGRs (as first supervisor).
- Deputy Head of the School of Interdisciplinary Studies. And now Head of School since 08/2022.
- Member of the Research and Knowledge Exchange Committee (SoIS, UoG) since 2018. I have headed this Committee (as Research Director) from August 2020 to July 2022 and led the development of the School's Research Strategy (2021-2026).
- 2018-2022, Research Director of the National Centre for Resilience which is hosted by the University of Glasgow
- Member of the University Sustainability Working Group (UoG) since 2018.
- Member of the University's Regional Working Group - Southeast Asia and Australasia since 2018.
- Member of the Senior Executive Group (SoIS, UoG) since 2018. I Chair this Committee since 08/2022.

- **UNU-EHS:** Head of Section from 2007 to 2017, managing a team of around 10-15 researchers, all supported through externally funded projects which I acquired.
- Contributed to setting the Institute's research, think tank function, education and capacity development agenda. Overall development and management of the Institute (as Director *ad interim*). Liaison with donors.
- Led the organization of a very satisfactory external evaluation of the Institute (as Director *ad interim*, UNU-EHS).
- Co-led the development of UNU-EHS' joint MSc Programme with the University of Bonn. Led the development of partner institutes in Indonesia.
- Support functions at UNU and UNU-EHS: Alternate UNU Representative in UN-Water from 2009 to 2015 (and UNU Focal Point in 2010-2012); UNU Focal Point for UN-Water's Task Force on Climate Change and Water (2010 to 2015); UNU Focal Point to the IPCC (2010-2017); UNU Focal Point in the Inter Agency Group of the UNISDR (2012-215); UNU-EHS Focal Point for the Partnership for Environment and Disaster Risk Reduction (2008-2017).

Skills, Memberships and Professional Functions

Mother tongue	**French**		
Other languages	**English**	**Spanish**	**German**
Reading skills	Excellent	Very Good	A2 Level
Writing skills	Excellent	Basic	A2 Level
Verbal skills	Excellent	Very Good	A2 level

Professional memberships

- Since 2019: European Geophysical Union (EGU)
- Since 2017: International Association of Hydrological Sciences (IAHS)
- Since 2011: Commission on Ecosystem Management of IUCN (CEM). 2017-Present: serving as co-lead for the thematic group "Ecosystem-based disaster risk reduction"
- Since 1997: American Society of Agronomy (ASA)
- Since 1997: Soil Science Society of America (SSSA)

Partnerships

- Since 2017: Friends of EbA
- Since 2008: Partnership for Environment and Disaster Risk Reduction
- 2013-2016: Member of the SNAP Working Group on Coastal Defenses

Current Editorial Boards

- Editor for Sustainability Science (since 2009)

Past Functions

- Chapter Review Editor for UNEP's GEO-4 book (published in 2007)
- Associate Editor for Agronomy Journal (2008-2015); Editorial Advisory Board Member for Outlook on Agriculture (2010-2017); Editor for PLoS Currents:Disasters (2012-2017); Editoral Board Member for Nutrient Cycling in Agroecosystems (2009-2020)

Reviewer for Peer-Reviewed Journals (selection)

Annales de Géographie; Climatic Change; Climate Risk and Development; Climate Risk Management; Current Opinion in Environmental Sustainability, Disasters; Earth's Future, Earth Science Reviews; Ecology and Society, Environmental Management; Environmental Science and Policy; Estuarine, Coastal and Shelf Science; Global Environmental Change; International Journal of Disaster Risk Reduction; Journal of Environmental Policy & Planning, Journal of Extreme Events; Natural Hazards; Natural Hazards and Earth System Sciences; Science of the Total Environment; Urban Climate; World Development.

Reviewer for Important Documents

- 2019: Reviewer for the 3rd UK Climate Change Risk Assessment "Evidence Report".
- 2019: Member of the Advisory Group and Reviewer of the European Environment Agency's Scoping Paper "Ecosystem-based approaches for climate change adaptation and disaster risk reduction - Exploring the knowledge base, policies and practices"

Also carried out acknowledged reviews or provided comments to various IUCN publications, including *Safe Havens: Protected Areas for Disaster Risk Reduction and Climate Change Adaptation* (2014) and *Nature-based Solutions to Address Global Societal Challenges* (2016)

Annexes

1. Publications
2. Secured externally funded projects

ANNEX 1: PUBLICATIONS

PAPERS IN REFEREED JOURNALS

1. Cremin E., O'Connor J., Banerjee S., Ly Ha Bui, Chanda A., Hieu Hong Hua, Da Van Huynh, Hue Le, Murshed S B., Mashfiqus S., Anh Vu, Sebesvari Z., Large A., **Renaud F.G.** (2023): Aligning the Global Delta Risk Index with SDG and SFDRR global frameworks to assess risk to socio-ecological systems in river deltas. *Sustainability Science* https://doi.org/10.1007/s11625-023-01295-3.
2. Peng Y., Welden N., **Renaud F.G.** (2023): A framework for integrating ecosystem services indicators intovulnerability and risk assessments of deltaic social-ecological systems. *Journal of Environmental Management 326.116682*. https://doi.org/10.1016/j.jenvman.2022.116682.
3. Rahman M.F., Ladd C.J.T., Large A., Banerjee S., Vovides A.G., Henderson A.C.G., **Renaud F.G.**, Balke T., Wood L., Le H., Huq S. Locally led adaptation is key to ending deforestation. *One Earth 6.81-85*. https://doi.org/10.1016/j.oneear.2023.01.011.
4. Anderson C.C., **Renaud F.G.**, Hanscomb S., Gonzalez-Ollauri A. (2022) Green, hybrid, or grey disaster risk reduction measures: What shapes public preferences for nature-based solutions? Journal of Environmental Management 310:114727. https://doi.org/10.1016/j.jenvman.2022.114727.
5. Blackwood I., **Renaud F.G.** (2022): Barriers and tools for implementing Nature-based solutions for railclimate change adaptation *Transportation Research Part D: Transport and Environment 113:103529*. https://doi.org/10.1016/j.trd.2022.103529.
6. Blackwood L., **Renaud F.G.**, Gillespie S. (2022): Nature-based solutions as climate change adaptation measures for rail infrastructure. *Nature-Based Solutions 2:100013*. https://doi.org/10.1016/j.nbsj.2022.100013
7. Gain A.K., Rahman M.R., Sadik Md S., Adnan M.S.G., Ahmad S., Ahsan S.M.M., Ashik-Ur-Rahman Md., Balke T., Datta D.K., Dewan C., Huq N., Khan M.S.A, Large A., Mallick B., Mohibbullah M., Mondal M.S., Narayan S., Rabbani G., Rahman R., **Renaud** F.G., Rogers K.G., van Loon-Steensma J.M. (2022): Overcoming challenges for implementing nature-based solutions in deltaic environments: insights from the Ganges-Brahmaputra delta in Bangladesh *Environmental Research Letters 17:064052*. https://doi.org/10.1088/1748-9326/ac740a.
8. Magnan A.K., Oppenheimer M., Garschagen M., Buchanan M.K., Duvat V.K.E., Forbes D.L., Ford J.D., Lambert E., Petzold J., **Renaud F.G.**, Sebesvari Z., van de Wal R.S.W., Hinkel J., Pörtner H.-O. (2022): Sea level rise risks and societal adaptation benefits in low lying coastal areas. *Scientific Reports 12:10677*. https://doi.org/10.1038/s41598-022-14303-w.
9. Reguero B.G., **Renaud F.G.**, Van Zanten B., Cohen-Shacham E., Beck M.W., Di Sabatino S., Jongman B. (2022), Nature-based solutions for natural hazards and climate change *Frontiers in Environmental Science 10:1101919* doi: 10.3389/fenvs.2022.1101910. (Editorial to a Special Issue).
10. **Renaud F.G.**, Zhou X., Dosher L., Barrett B., Huang S. (2022). Synergies and trade-offs between sustainable development goals and targets. innovative approaches and new perspectives *Sustainability Science 17:1317–1322*. https://doi.org/10.1007/s11625-022-01209-9. (Editorial to a Special Issue)
11. Sanogo M.D.M., Dayamba S.D., **Renaud** F.G., Feurer M. (2022): From wooded savannah to farmland and settlement. Population growth, drought, energy needs and cotton price incentives driving changes in Wacoro, Mali. *Land 11:2117* https://doi.org/10.3390/land11122117.
12. Wei M., Huang S., Ling L., Zhang T., Akram W., Khatoon Z., **Renaud F.G.** (2022): Evolution of water quality and biota in the Panjiakou Reservoir, China as a consequence of social and economic development: implications for synergies and trade-offs between Sustainable Development Goals. *Sustainability Science 17:1385–1404* https://doi.org/10.1007/s11625-021-01046-2
13. Xu J., Barrett B., **Renaud F.G.** (2022): Ecosystem services and disservices in the Luanhe River Basin in China under past, current and future land uses: implications for the sustainable development goals. *Sustainability Science 17:1347–1364* https://doi.org/10.1007/s11625-021-01078-8.
14. Xu L., **Renaud F.G.**, Barrett B. (2022): Modelling land system evolution and dynamics of terrestrial carbon stocks in the Luanhe River Basin, China: a scenario analysis of trade-offs and synergies between sustainable development goals *Sustainability Science 17:1323–1345*. https://doi.org/10.1007/s11625-021-01004-y.
15. Zhao J., Cher H., Jiang Q., Xia X., Xu J., Hoey T., Barrett B., **Renaud F.G.**, Bosher L., Zhou X. (2022): Large scale food risk assessment under diferent development strategies: the Luanhe River Basin in China. *Sustainability Science 17:1365–1384* https://doi.org/10.1007/s11625-021-01034-6.
16. Zhou X., Moinuddin M., **Renaud F.**, Barrett B., Xu J., Jiang Q., Zhao J., Xia X., Bosher L., Huang S., Hoey T. (2022): Development of an SDG interlinkages analysis model at the river basin scale: a case study in the Luanhe River Basin, China. *Sustainability Science 17:1405–1433*. https://doi.org/10.1007/s11625-021-01065-z.
17. Adamo S.B., Djalante R., Dhar Chakrabarti P.G., **Renaud F.G.**, Woldie Yalew A., Stabinsky D., Zommers Z., Warner K. (2021): Editorial overview: Slow onset events related to climate change. Current Opinion in Environmental Sustainability 50:A1–A7. (Editorial to a Special Issue). https://doi.org/10.1016/j.cosust.2021.08.003.

18. Anderson C.C., **Renaud F.G.** (2021): A review of public acceptance of nature-based solutions: The 'why', 'when', and 'how' of success for disaster risk reduction measures *Ambio 50.1552–1573.* https://doi.org/10.1007/s13280-021-01502-4
19. Anderson C.C., **Renaud F.G.**, Hagenlocher M., Day J.W. (2021). Assessing Multi-Hazard Vulnerability and Dynamic Coastal Flood Risk in the Mississippi Delta: The Global Delta Risk Index as a Social-Ecological Systems Approach. *Water 13.577.* https://doi.org/10.3390/w13040577.
20. Anderson C.C., **Renaud F.G.**, Hanscomb S., Munro K.E., Gonzalez-Ollauri A., Thomson C.S., Pouta E., Soini K., Loupis M., Panga D. Stefanopoulou M. (2021): Public acceptance of Nature-Based Solutions for natural hazard risk reduction: Survey findings from three study sites in Europe. *Frontiers in Environmental Science 9.678938.* doi. 10.3389/fenvs.2021.678938.
21. Sudmeier-Rieux K., Arce Mojica T., Boehmer H.J., Doswald N., Emerton L., Friess D.A., Galvin S., Hagenlocher M., James H., Laban P., Lacambra C., Lange W., McAdoo B.G., Moos C., Mysiak J., Narvaez L., Nehren U., Peduzzi P., **Renaud** F.G., Sandholz S., Schreyers L., Sebesvari Z., Tom T., Triyanti A., van Eijk P., van Staveren M., Vicarelli M. and Walz Y. (2021): Scientific evidence for ecosystem-based disaster risk reduction. *Nature Sustainability 4:803-810.* https://doi.org/10.1038/s41893-021-00732-4.
22. Gain A.K., Giupponi C., **Renaud F.G.**, Vafeidis A.T. (2020): Sustainability of complex social-ecological systems: methods, tools, and approaches. *Regional Environmental Change 20 (102).* (Editorial to a Special Issue). https://doi.org/10.1007/s10113-020-01692-9.
23. Kuenzer C., Heimhuber V., Day J., Varis O., Buck T., **Renaud F.**, Guohuan L., Vo Quoc Tuan, Schlurmann T., Glamore W. (2020): Profiling resilience and adaptation in mega deltas: A comparative assessment of the Mekong, Yellow, Yangtze, and Rhine deltas. *Ocean and Coastal Management 198 105362.* https://doi.org/10.1016/j.ocecoaman.2020.105362.
24. Kumar P., Debele S.E., Sahani J., Aragão L., Barisani F., Basu B., Bucchignani E., Charizopoulos N., Di Sabatino S., Domeneghetti A., Edo A.S., Finér L., Gallotti G., Juch S., Leo L.S., Loupis M., Mickovski S.B., Panga D., Pavlova I., Pilla F., Prats A.L., **Renaud F.G.**, Rutzinger M., Basu A.S., Shah M.A.R., Soini K., Stefanopoulou M., Toth E., Ukonmaanaho L., Vranic S., Zieher T. (2020): Towards an operationalisation of nature-based solutions for natural hazards. *Science of the Total Environment 731:138855.* https://doi.org/10.1016/j.scitotenv.2020.138855.
25. Sentek V., Braun G., Braun M., Sebesvari Z., **Renaud** F.G., Herbst M., Frindte K., Amelung W. (2020): Salinity-independent dissipation of antibiotics from flooded tropical soil: a microcosm study. *Scientific Reports* 10:14088. https://doi.org/10.1038/s41598-020-70943-w.
26. Shah M.A.R., **Renaud F.G.**, Anderson C.C., Wild A., Domeneghetti A., Polderman A., Vujsis A., Pulvirenti B., Basu B., Thomson C., Panga D., Pouta E., Toth E., Pilla F., Sahani J., Ommer J., El Zohbik J., Munro K., Stefanopoulou M., Loupis M., Pangas N., Kumar P., Debele S., Preuschmann S., Zixuann W. (2020): A review of hydro-meteorological hazard, vulnerability, and risk assessment frameworks and indicators in the context of nature-based solutions. *International Journal for Disaster Risk Reduction 50.101728.* https://doi.org/10.1016/j.ijdrr.2020.101728.
27. Anderson C.C., Hagenlocher M., **Renaud F.G.**, Sebesvari Z., Cutter S.L., Emrich C.T. (2019): Comparing index-based vulnerability assessments in the Mississippi Delta: Implications of contrasting theories, indicators, and aggregation methodologies. *International Journal for Disaster Risk Reduction 39.101128.* https://doi.org/10.1016/j.ijdrr.2019.101128.
28. Braun G., Braun M., Kruse J., Amelung W., **Renaud** F.G., Khoi C.M., Duong M.V., Sebesvari Z. (2019): Pesticides and antibiotics in permanent rice, alternating rice-shrimp and permanent shrimp systems of the coastal Mekong Delta, Vietnam. *Environment International 127.442–451.* https://doi.org/10.1016/j.envint.2019.03.038.
29. Cohen Shacham E., Andrade A., Dalton J., Dudley N., Jones M., Kumar C., Maginnis S., Maynard S., Nelson C.R., **Renaud F.G.**, Welling R., Walters G. (2019). Core principles for successfully implementing and upscaling Nature-based Solutions. *Environmental Science and Policy 98:20-29.* https://doi.org/10.1016/j.envsci.2019.04.014.
30. Hagenlocher M., Meza I., Anderson C., Min A., **Renaud F.G.**, Walz Y., Siebert S., Sebesvari Z. (2019): Drought vulnerability and risk assessments: state of the art, persistent gaps, and research agenda. *Environmental Research Letters 14:083002.* https://doi.org/10.1088/1748-9326/ab225d.
31. Minh Tu Nguyen, **Renaud** F.G., Sebesvari Z. (2019). Drivers of change and adaptation pathways of agricultural systems facing increased salinity intrusion in coastal areas of the Mekong and Red River deltas in Vietnam. *Environmental Science and Policy 92:331–348.* https://doi.org/10.1016/j.envsci.2018.10.016.
32. Minh Tu Nguyen, **Renaud F.G.**, Sebesvari Z., Duy Can Nguyen (2019): Resilience of agricultural systems faring increased salinity intrusion in deltaic coastal areas of Vietnam. *Ecology and Society 24(4):19.* https://doi.org/10.5751/ES-11186-240419.
33. Sebesvari Z., Woelki J., Walz Y., Sudmeier-Rieux K., Sandholz S., Tol S., Ruiz Garcia V., Blackwood K., **Renaud F.G.** (2019): Opportunities for considering green infrastructure and ecosystems in the Sendai Framework Monitor. *Progress in Disaster Science 2:100021.* https://doi.org/10.1016/j.pdisas.2019.100021.
34. Hagenlocher M., **Renaud F.G.**, Haas S., Sebesvari Z. (2018). Vulnerability and risk of deltaic social-ecological systems exposed to multiple hazards. *Science of the Total Environment 631-632:71-80* https://doi.org/10.1016/j.scitotenv.2018.03.013.

35. Braun G., Sebesvari Z , Braun M., Kruse J., Amelung W., An N.T., **Renaud F.G.** (2018): Does sea-dyke construction affect the spatial distribution of pesticides in agricultural soils? - A case study from the Red River Delta, Vietnam. *Environmental Pollution 243:890-899.* https://doi.org/10.1016/j.envpol.2018.09.050.
36. Szabo S., Hossain Md.S., **Renaud F.**, Traore D., Hussain A., Matczak P., Ahmad S., Singh D.R., Neumann B., Matthews Z. (2018): Accelerating progress towards the Zero Hunger Goal in cross boundary climate change hotspots. *Environment: Science and Policy for Sustainable Development 60.18-27.* https://doi.org/10.1080/00139157.2018.1449530
37. Whelchel A.W., **Renaud F.G.**, Sudmeier-Rieux K., Sebesvari Z. (2018). Advancing ecosystems and disaster risk reduction in policy, planning, implementation, and management. *International Journal for Disaster Risk Reduction 32:1-3* (Editorial to a Special Issue). https://doi.org/10.1016/j.ijdrr.2018.08.008.
38. Whelchel A.W., Reguero B.G , van Wesenbeeck B , **Renaud F.G.** (2018): Advancing disaster risk reduction through the integration of science, design, and policy into eco-engineering and several global resource management processes. *International Journal for Disaster Risk Reduction 32:29-41.* https://doi.org/10.1016/j.ijdrr.2018.02.030.
39. Asare-Kyei D., **Renaud F.G.**, Kloos J., Walz Y., Rhyner J. (2017): Development and validation of risk profiles of West African rural communities facing multiple natural hazards. *PLoS ONE 12(3): e0171921. doi:10.1371/journal.pone.0171921.* DOI:10.1371/journal.pone.0171921
40. Sebesvari Z., Rodrigues S., **Renaud F.** (2017): Mainstreaming ecosystem based climate change adaptation into integrated water resources management in the Mekong region. *Regional Environmental Change 17:1907-1920* DOI 10.1007/s10113-017-1161-1.
41. Snorek J., Moser L., **Renaud F.G.** (2017). The production of contested landscapes: Enclosing the pastoral commons in Niger. *Journal of Rural Studies 51:125-140.* https://doi.org/10.1016/j.jrurstud.2017.01.015.
42. Bhaduri A., Bogardi J., Siddiqi A., Voigt H., Vörösmarty C., Pahl-Wostl C , Bunn S.E., Shrivastava P., Lawford R., Foster S., **Renaud F.**, Kremer H., Bruns A., Rodriguez Osuna V. (2016): Achieving Sustainable Development Goals from a Water Perspective. *Frontiers in Environmental Science 4.64.* https://doi.org/10.3389/fenvs.2016.00064.
43. Brondizio E.S., Foufoula-Georgiou E., Szabo S., Vogt N., Sebesvari S., **Renaud F.G.**, Newton A., Anthony E., Mansur A.V., Matthews Z., Hetrick S., Costa S.M., Tessler Z., Tejedor A , Longjas A., Dearing J.A. (2016): Catalizing Action towards the sustainability of deltas. *Current Opinion in Environmental Sustainability 19.182-194.* https://doi.org/10.1016/j.cosust.2016.05.001
44. Hemstock S.L , Buliruarua L.-A., Chan E.Y.Y., Chan G , Jarot Des Combes H , Davey P., Farrell P., Griffiths S., Hansen H., Hatch T., Holloway A., Manuella-Morris T., Martin **T.**, **Renaud F.G.**, Roman K., Ryan B., Szarzynski J., Shaw D., Yasukawa S., Yeung T., Murray V. (2016): Accredited qualifications for capacity development in disaster risk reduction and climate change adaptation. *Australasian Journal of Disaster and Trauma Studies 20:15-33.*
45. **Renaud F.G.**, Szabo S., Matthews Z. (2016): Sustainable deltas: livelihoods, ecosystem services, and policy implications. *Sustainability Science 11:519-523.* (Editorial to a Special Feature). https://doi.org/10.1007/s11625-016-0380-6.
46. Sebesvari S., **Renaud F.G.**, Haas S., Tessler Z., Hagenlocher M., Kloos J., Szabo S., Tejedor A , Kuenzer C. (2016): A review of vulnerability indicators for deltaic social-ecological systems. *Sustainability Science 11:575-590.* https://doi.org/10.1007/s11625-016-0366-4.
47. Szabo S., Nicholls R.J., Neumann B., **Renaud F.G.**, Matthews Z., Sebesvari Z., AghaKouchak A , Bales R., Ruktanonchai W.C , Kloos J., Foufoula-Georgiou E., Wester P., New M., Rhyner J , Hutton C. (2016): Making SDGs Work for Climate Change Hotspots. *Environment: Science and Policy for Sustainable Development 58:24-33.* https://doi.org/10.1080/00139157.2016.1209016.
48. Szabo S., Brondizio E., Hetrick S , **Renaud F.G.**, Nicholls R.J , Matthews Z., Tessler Z., Tejedor A., Sebesvari Z., Foufoula-Georgiou E., da Costa S., Dearing J. (2016): Interlinkages of population dynamics, delta vulnerability and environmental change. Comparison of the Mekong, Ganges-Brahmaputra and Amazon delta regions. *Sustainability Science 11:539-554.* https://doi.org/10.1007/s11625-016-0372-6.
49. Vrba J., **Renaud F.G.** (2016): Overview of groundwater for emergency use and human security. *Hydrogeology Journal 24.273–276.* (Essay to a Group of Articles). https://doi.org/10.1007/s10040-015-1355-x.
50. Asare-Kyei D., Kloos J., **Renaud F.G.** (2015): Multi-scale participatory indicator development approaches for climate change risk assessment in West Africa. *International Journal for Disaster Risk Reduction 11.13-34.* https://doi.org/10.1016/j.ijdrr.2014.11.001.
51. Chau N.D.G., Sebesvari S., **Renaud F.**, Rosendahl I., Quang Hoang Minh, Amelung W. (2015): Occurrence and dissipation of the antibiotics Sulfamethoxazole, Sulfadiazine, Trimethoprim, and Enrofloxacin in the Mekong Delta, Vietnam. *PLoS One 10(7): e0131855 doi:10.1371/journal.pone.0131855.* doi: 10.1371/journal.pone.0131855.
52. Chau N.D.G., Sebesvari S., Amelung W., **Renaud F.G.** (2015). Pesticide pollution of multiple drinking water sources in the Mekong Delta, Vietnam: evidence from two provinces. *Environmental Science and Pollution Research 22.9042-9058.* https://doi.org/10.1007/s11356-014-4034-x.
53. **Renaud F.G.**, Thi Thu Huong Le, Lindener C., Vo Thi Guong, Sebesvari Z. (2015): Resilience and shifts in agro-ecosystems facing increasing sea level rise and salinity intrusion in Ben Tre Province, Mekong Delta. *Climatic Change 133.69-84.* https://doi.org/10.1007/s10584-014-1123-4

54. Sudmeier-Rieux K., Ira Paleo U., Garschagen M., Estrella M., **Renaud F.G.**, Jaboyedoff M. (2015): Opportunities, incentives and challenges to risk sensitive land use planning. Lessons from Nepal, Spain and Vietnam. *International Journal for Disaster Risk Reduction 14:205-224.* https://doi.org/10.1016/j.ijdrr.2014.09.009.
55. Sušnik J., Vamvakeridou-Lyroudia L.S., Baumert N., Kloos J., **Renaud F.G.**, La Jeunesse I., Mabrouk B., Savić D.A., Kapelan Z., Ludwig R., Fischer G., Roson R., Zografos C. (2015): Interdisciplinary assessment of sea-level rise and climate change impacts on the lower Nile delta, Egypt. *Science of the Total Environment 503-504:279-288.* https://doi.org/10.1016/j.scitotenv.2014.06.111.
56. Szabo S., **Renaud F.G.**, Hossain Md.S., Sebesvari Z., Matthews Z., Foufoula-Georgiou E., Nicholls R... (2015): Sustainable development goals offer new opportunities for tropical delta regions. *Environment Science and Policy for Sustainable Development 57:16-23.* https://doi.org/10.1080/00139157.2015.1048142.
57. Kloos J., **Renaud F.G.** (2014). Organic cotton production as an adaptation option in north-west Benin. *Outlook on Agriculture 43:91-100.* doi: 10.5367/oa.2014.0166.
58. Snorek J., **Renaud F.G.**, Kloos J. (2014): Divergent adaptation to climate variability: A case study of pastoral and agricultural societies in Niger. *Global Environmental Change 29:371-386.* https://doi.org/10.1016/j.gloenvcha.2014.06.014
59. Wilbers G.-J., Sebesvari Z., **Renaud F.G.** (2014): Piped-water supplies in rural areas of the Mekong Delta, Vietnam: Water quality and household perceptions. *Water 6:2175-2194.* https://doi.org/10.3390/w6082175.
60. Wilbers G.-J., Becker M., Sebesvari Z., **Renaud F.G.** (2014): Spatial and temporal variability of surface water pollution in the Mekong Delta, Vietnam. *Science of the Total Environment 485-486:653-665.* https://doi.org/10.1016/j.scitotenv.2014.03.049.
61. Depietri Y., Welle T., **Renaud** F.G. (2013): Social vulnerability assessment of the Cologne urban area (Germany) to heat waves: links to ecosystem services. *International Journal for Disaster Risk Reduction 6:98-117.* https://doi.org/10.1016/j.ijdrr.2013.10.001.
62. Gain A.K., Apel H., **Renaud F.G.**, Giupponi C. (2013): Threshold of hydrologic flow regime of a river and investigation of climate change impact - the case of lower Brahmaputra river Basin. *Climatic Change 120:463–475.* https://doi.org/10.1007/s10584-013-0800-x
63. Pham Van Toan, Sebesvari Z., Bläsing M., Rosendahl I., **Renaud F.G.** (2013): Pesticides in the Mekong Delta Vietnam – application practices and residues in sediment, surface and drinking water. *Science of the Total Environment 452-453:28-39.* https://doi.org/10.1007/s11356-014-4034-x.
64. **Renaud F.G.**, Syvitski J.P.M., Sebesvari Z., Werners S.E., Kremer H., Kuenzer C., Ramesh R., Jeuken A., Friedrich J. (2013): Tipping from the Holocene to the Anthropocene: how threatened are major world deltas? *Current Opinion in Environmental Sustainability 5:644-654.* https://doi.org/10.1016/j.cosust.2013.11.007.
65. Wilbers G.-J., Sebesvari Z., Rechenburg A., **Renaud F.G.** (2013): The effects of household, spatial and behavioral explicit parameters on the quality of harvested rainwater in the Mekong Delta, Vietnam. *Environmental Pollution 182:225-232.* https://doi.org/10.1016/j.envpol.2013.07.019.
66. Depietri Y., **Renaud F.G.**, Kallis G. (2012): Heat waves and floods in urban areas: a policy-oriented review of ecosystem services. *Sustainability Science 7:95-107.* https://doi.org/10.1007/s11625-011-0142-4.
67. Gain A.K., Giupponi C., **Renaud F.G.** (2012): Climate change adaptation and vulnerability assessment of water resources systems in developing countries: a generalized framework and a feasibility study in Bangladesh. *Water 4:345-366.* https://doi.org/10.3390/w4020345.
68. Förster H., Pachova N.I., **Renaud F.G.** (2011): Energy and land use in the Pamir-Alai Mountains: Examples from five social-ecological regions. *Mountain Research and Development 31:305-314.* http://dx.doi.org/10.1659/MRD-JOURNAL-D-11-00041.1.
69. Pham Manh Hoai, Sebesvari S., Tu Binh Minh, Pham Hung Viet, **Renaud F.G.** (2011): Pesticide Pollution in Agricultural Areas of Northern Vietnam: Case Study in Hoang Liet and Minh Dai Communes. *Environmental Pollution 159:3344-3350.* Corrigendum published in 2015. https://doi.org/10.1016/j.envpol.2011.08.044.
70. **Renaud F.G.**, Dun O., Warner K., Bogardi J. (2011): A decision framework for environmentally induced migration. *International Migration 49(S1):e5-e29.* https://doi.org/10.1111/j.1468-2435.2010.00678.x.
71. **Renaud F.**, Perez R. (2010): Climate change vulnerability and adaptation assessments. Editorial. *Sustainability Science 5:155-157.* (Editorial to a Special Feature). https://doi.org/10.1007/s11625-010-0114-0.
72. **Renaud F.G.**, Birkmann J., Damm M., Gallopín G.C. (2010): Understanding multiple thresholds of coupled social-ecological systems exposed to natural hazards as external shocks. *Natural Hazards 55:749-763.* https://doi.org/10.1007/s11069-010-9505-x.
73. Sepúlveda A., Schluep M., **Renaud F.G.**, Streicher M., Kuehr R., Hagelüken C., Gerecke A.C. (2010). A review of the environmental fate and effects of hazardous substances released from electrical and electronic equipment during recycling: examples from China and India. *Environmental Impact Assessment Review 30:28-41* https://doi.org/10.1016/j.eiar.2009.04.001.
74. Warner K., Hamza M., Oliver-Smith A., **Renaud F.**, Julca A. (2010): Climate Change, Environmental Degradation and Migration. *Natural Hazards 55:689-715.* https://doi.org/10.1007/s11069-009-9419-7.
75. Kaplan M., **Renaud F.G.**, Lüchters G. (2009): Vulnerability Assessment and Protective Effects of Coastal Vegetation during the 2004 Tsunami in Sri Lanka. *Natural Hazards and Earth System Sciences 9:1479-1494.*

76. **Renaud F.**, Jansky L. (2008): Risk and vulnerability in mountain regions. *Mountain Research and Development 28(2):166-167.*
77. **Renaud F.G.**, Brown C.D. (2008). Simulating pesticides in ditches to assess ecological risk (SPIDER): II. Benchmarking for the drainage model. *Science of the Total Environment 394.124-133.* https://doi.org/10.1016/j.scitotenv.2008.01.014.
78 **Renaud F.G.**, Bellamy P.H , Brown C.D. (2008). Simulating pesticides in ditches to assess ecological risk (SPIDER): I. Model description *Science of the Total Environment 394:112 123.* https://doi.org/10.1016/j.scitotenv.2007.11.038.
79. **Renaud F.G.**, Brown C.D., Fryer C J , Walker A (2004). A lysimeter experiment to investigate temporal changes in the availability of pesticide residues for leaching. *Environmental Pollution 131(1). 81-91.* https://doi.org/10.1016/j.envpol.2004.02.028.
80 **Renaud F.G.**, Leeds-Harrison P.B., Brown C.D., van Beinum W (2004). Determination of time-dependent partition coefficients for several pesticides using diffusion theory *Chemosphere 57: 1525-1535.* https://doi.org/10.1016/j.chemosphere.2004.08.059.
81. **Renaud F.G.**, Bokall A.G.A., Toy R., Robertson S. (2004). Evaluation of approaches for terrestrial hazard classification. *Chemosphere 57. 1697-1706.* https://doi.org/10.1016/j.chemosphere.2004.08.079.
82 **Renaud F.**, Scott H.D., Brewer D.W. (2001): Soil temperature dynamics and heat transfer in a soil cropped to rice. *Soil Science 166(12). 910-920.*
83. **Renaud F.**, Latham L., Na Nakorn U. (2000): Farm labour availability, labour costs, and soil-conservation possibilities in a study area of northern Thailand *Tropical Agriculture (Trinidad) 77(1): 42-46.*
84 **Renaud F.**, Bechstedt H.-D., Na Nakorn U. (1998): Farming systems and soil-conservation practices in a study area of northern Thailand. *Mountain Research and Development 18(4): 345-356.*
85 **Renaud F.** (1997): Financial cost-benefit analysis of soil conservation practices in northern Thailand *Mountain Research and Development 17(1): 11 18.*

EDITED BOOKS (PEER-REVIEWED)

Renaud F.G., Sudmeier-Rieux K., Estrella M and Nehren U., Editors (2016): Ecosystem-Based Disaster Risk Reduction and Adaptation in Practice. Springer Advances in Natural and Technological Hazards Research, Dordrecht, 598p

Renaud F.G., Sudmeier-Rieux K. and Estrella M., Editors (2013): The role of ecosystems in disaster risk reduction. UNU-Press, Tokyo, 520p.

Renaud F.G. and Kuenzer C., Editors (2012). The **Mekong** Delta System: Interdisciplinary Analyses of a River Delta. Springer Environmental Science and Engineering, Dordrecht, 463p.

BOOK CHAPTERS (PEER-REVIEWED/EDITED VOLUMES)

Renaud F.G., Sebesvari Z., Gain A.K. (2021): *Assessment of Land/Catchment Use and Degradation*. In. Handbook of Water Resources Management: Discourses, Concepts and Examples (Eds J.J. Bogardi et al.) Springer, Cham. https://doi.org/10.1007/978-3-030-60147-8_15

Kron W., Tingsanchali T., Loucks D.P , **Renaud F.G.**, Bogardi J J , Fekete A. (2021): *Water-Related Hazard and Risk Management*. In. Handbook of Water Resources Management: Discourses, Concepts and Examples (Eds. J.J Bogardi et al.). Springer. Cham. https://doi.org/10.1007/978-3-030-60147-8_22

Dumitru A. and Wendling L. (Eds.) (2021): Evaluating the Impact of Nature based Solutions: A Handbook for Practitioners. European Commission, Brussels, 373p Lead Author of Chapter 4: "Indicators of NbS performance and impact" and a **Contributing Author of Chapter 5** "Application of the NbS impact evaluation framework: Nbs performance and impact evaluation case studies".

Dumitru A and Wendling L. (Eds) (2021): Evaluating the Impact of Nature-based Solutions: Appendix and Methods. European Commission, Brussels, 1177p **Coordinating Lead Author** for the section on "Water Management" and the section on "Knowledge and Social Capacity Building for Sustainable Urban Transformation".

Abeling T., Huq N., Chang-Seng D., Birkmann J., Wolfertz J , **Renaud F.** and GarschagenM. (2019): *Understanding disaster resilience*. In. Framing Community Resilience (eds. H Deeming, M. Fordham, C. Kuhlicke, L. Pedoth, S. Schneiderbauer and C. Shreve) John Wiley & Sons Ltd, pp. 9 76.

Triyanti A , Walz Y., Marfai M.A., **Renaud** F. and Djalante R (2017): *Ecosystem-based disaster risk reduction in Indonesia: unfolding challenges and opportunities* In: Disaster Risk Reduction in Indonesia. Progress, Challenges, and Issues (eds. R. Djalante, M. Garschagen, F. Thomalla and R. Shaw). Springer International Publishing Switzerland, pp.445-467.

Renaud F.G., Nehren U., Sudmeier-Rieux K. and Estrella M. (2016): *Developments and Opportunities for Ecosystem-Based Disaster Risk Reduction and Climate Change Adaptation*. In. Ecosystem-Based Disaster Risk Reduction and Adaptation in Practice (eds F.G. Renaud, K. Sudmeier Rieux, M. Estrella and U Nehren). Springer International Publishing Switzerland, pp.1-20

Kloos J. and **Renaud F.G.** (2016): *Overview of Ecosystem-Based Approaches to Drought Risk Reduction Targeting Small-Scale Farmers in Sub-Saharan Africa*. In: Ecosystem-Based Disaster Risk Reduction and Adaptation in Practice (eds. F.G. Renaud, K. Sudmeier-Rieux, M. Estrella and U. Nehren). Springer International Publishing Switzerland, pp.199-226.

Estrella M., **Renaud F.G.**, Sudmeier-Rieux K. and Nehren U. (2016): *Defining New Pathways for Ecosystem-Based Disaster Risk Reduction and Adaptation in the Post-2015 Sustainable Development Agenda*. In: Ecosystem-Based Disaster Risk Reduction and Adaptation in Practice (eds. F.G. Renaud, K. Sudmeier-Rieux, M. Estrella and U. Nehren). Springer International Publishing Switzerland, pp 553-591.

Welle T., Depietri Y., Angignard M., Birkmann J., **Renaud** F. and Greiving S. (2014): *Vulnerability assessment to heat waves, floods, and earthquakes using the MOVE framework: Test case Cologne, Germany*. In: Assessment of vulnerability to natural hazards: A European perspective (eds. J. Birkmann, S. Kienberger and D.E. Alexander). Elsevier, San Diego, pp 91-124.

Renaud F.G. (2013): *Environmental components of vulnerability*. In: Measuring vulnerability to natural hazards: Towards disaster resilient societies (ed. J. Birkmann). 2nd Edition, United Nations University Press, Tokyo, pp.109-123.

Renaud F.G., Sudmeier-Rieux K. and Estrella M. (2013): *The role of ecosystems for disaster risk reduction*. In: The role of ecosystems in disaster risk reduction (eds. F.G. Renaud, K. Sudmeier-Rieux and M. Estrella). UNU-Press, Tokyo, pp. 3-25.

Estrella M., **Renaud F.G.** and Sudmeier-Rieux. K. (2013): *Opportunities, challenges and future perspectives for ecosystem-based disaster risk reduction*. In: The role of ecosystems in disaster risk reduction (eds. F.G. Renaud, K. Sudmeier-Rieux and M. Estrella). UNU-Press, Tokyo, pp. 437-456.

Renaud F.G. and Kuenzer C. (2012): *Introduction*. In: The Mekong Delta system. Interdisciplinary analyses of a river delta (eds. F.G. Renaud and C. Kuenzer). Springer Environmental Science Engineering, Dordrecht, pp.3-5.

Renaud F.G. and Kuenzer C. (2012): *The water-development nexus: importance of knowledge, information and cooperation in the Mekong delta*. In: The Mekong Delta system. Interdisciplinary analyses of a river delta (eds. F.G. Renaud and C. Kuenzer). Springer Environmental Science Engineering, Dordrecht, pp.445-458.

Renaud F. and Wirkus L. (2012): *Water, climate change and human security: conflict and migration*. In: The global water crisis: addressing an urgent security issue (ed. H. Bigas). UNU-INWEH, Hamilton, pp. 34-45.

Kuenzer C. and **Renaud F.G.** (2012): *Climate and environmental change in river deltas globally: Expected impacts, resilience, and adaptation*. In: The Mekong Delta system. Interdisciplinary analyses of a river delta (eds. F.G. Renaud and C. Kuenzer). Springer Environmental Science Engineering, Dordrecht, pp.7-46.

Wagner F., Vuong Bui Tran and **Renaud F.G.** (2012). *Groundwater resources in the Mekong Delta: availability, utilization and risks*. In: The Mekong Delta system. Interdisciplinary analyses of a river delta (eds. F.G. Renaud and C. Kuenzer). Springer Environmental Science Engineering, Dordrecht, pp.201-220.

Sebesvari Z., Huong Thi Thu Le, Pham Van Toan, Arnold U. and **Renaud** F.G. (2012): *Agriculture and water quality in the Vietnamese Mekong Delta*. In: The Mekong Delta system. Interdisciplinary analyses of a river delta (eds. F.G. Renaud and C. Kuenzer). Springer Environmental Science Engineering, Dordrecht, pp 331-361.

Renaud F.G. (2011): *Water pollution and over-exploitation: assessing the vulnerability of people exposed to creeping water-related hazards*. In: Challenges in water resources management. Vulnerability, risk and water resources preservation (ed. E. Eufrasie). Water Civilizations International Centre, Italy, pp. 31-39.

Marie K. and **Renaud F.** (2011): *Differentials in Impacts and Recovery in the Aftermath of the 2004 Indian Ocean Tsunami: Local Examples at Different Scales in Sri Lanka*. In: Coping with Global Environmental Change, Disasters and Security – Threats, Challenges, Vulnerabilities and Risks (eds. H.G. Brauch, Ú. Oswald Spring, C. Mesjasz, J. Grin, P. Kameri-Mbote, B. Chourou, P. Dunay and J. Birkmann). Springer Verlag, New York, pp. 1129-1140.

Garschagen M., **Renaud F.G.**, and Birkmann J. (2011). *Dynamic Resilience of Peri-Urban Agriculturalists in the Mekong Delta Under Pressures of Socio-Economic Transformation and Climate Change*. In: Environmental Change and Agricultural Sustainability in the Mekong Delta (eds. M.A. Stewart and P.A. Coclanis). Advances in Global Change Research vol. 45, Springer Netherlands, pp. 141–163

Pachova N.I., **Renaud F.**, and Jansky L. (2011): *Land degradation, livelihoods and vulnerability in Pamir-Alai mountains in Central Asia*. In: Global change, biodiversity and livelihoods in cold desert region of Asia (eds. K.G. Saxena, L. Liang and X. Xue). Bishen Singh Mahendra Pal Singh, India, pp. 233-242.

Sebesvari Z., Le T.T.H., and **Renaud F.G.** (2011). *Climate Change Adaptation and Agrichemicals in the Mekong Delta, Vietnam*. In: Environmental Change and Agricultural Sustainability in the Mekong Delta (eds. M.A. Stewart and P.A. Coclanis). Advances in Global Change Research vol. 45, Springer Netherlands, pp. 219–239.

Scott H.D. and **Renaud F.G.** (2007): *Aeration and drainage*. In: Irrigation of agricultural crops (eds. R.J. Lascano and R.E. Sojka). Soil Science Society of America, Madison, pp. 195-236.

Renaud F.G. (2006). *Environmental components of vulnerability*. In: Measuring vulnerability to natural hazards. Towards disaster resilient societies (ed. J. Birkmann). United Nations University Press, Tokyo, pp.117-127.

Affeltranger B., Bogardi J., and **Renaud F.** (2005): *Living with water*. In: Know risk. United Nations, Geneva, pp.258-261

Scott H.D., Miller D.M., and **Renaud F.G.** (2003): *Rice soils: Physical and chemical characteristics and behavior*. In: Rice: Origin, History, Technology, and Production (eds C.W. Smith and R.H. Dilday). John Wiley & Sons, Inc., Hoboken, NJ, pp.297-329

Renaud F. and Attavirој P. (1996). *Sharing knowledge for better land husbandry in the uplands of northern Thailand: a concept for on-farm research.* In: Soil Conservation Extension. From Concepts to Adoption (eds. S. Sombatpanit, M.A. Zöbisch, D.W. Sanders and M.G. Cook). Soil and Water Conservation Society of Thailand, pp.207-216.

EDITORIALS, REVIEWS, STAND-ALONE SERIES

Doswald N., JanzenS., Nehren U., Santamaría K., VervestM.-J., Sans J., Estbauer L., Chavda S., Sandholz S., **Renaud F.**, Ruiz V., Narvaez L., Yang S., Mohil O., Uzoski D., Gerner N. and Grey C. (2021). Words into Action. Nature-based solutions for disaster risk reduction. United Nations Office for Disaster Risk Reduction, Geneva, 259p

Hagenlocher M., Schneiderbauer S., Sebesvari Z., Bertram M., Renner K., **Renaud F.**, Wiley H. and Zebisch M. (2018): Climate Risk Assessment for Ecosystem-based Adaptation. A guidebook for planners and practitioners. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn. https://www.adaptationcommunity.net/wp-content/uploads/2018/06/giz-eurac-unu-2018-en-guidebook-climate-risk-asessment-eba.pdf

Walz Y., Haas S., Greenough K., Furkuor G., Mück M., Taubenböck H., van Sassen S. and **Renaud F.** (2017): Risk assessment in West Africa. A handbook for Practitioners. Part I: Guidelines. Version 1, August 2017. UNU-EHS, DLR & WASCAL, 64p.

Renaud F. and Schuster-Wallace C. (Editors) (2017): Groundwater and Human Security. UNU-INWEH, Hamilton, Canada, 301p

Sebesvari Z. and **Renaud F.** (2017): What Mekong Delta communities can teach us about access to safe water. Online Op-Ed, published by Our World, United Nations University. https://ourworld.unu.edu/en/what-mekong-delta-communities-can-teach-us-about-access-to-safe-water (posted 23/08/17).

Salvaterra T., Allenbach K., Hobson P., Ibisch P.L., Korn H., Mysiak J., **Renaud F.**, Pulquério M. (2016). Exploring the potential of ecosystem-based approaches – Ecosystem-based Adaptation and Ecosystem based Disaster Risk Reduction. Policy brief with proceedings from a PLACARD session convened as part of the 4th Adaptation Futures Conference, 10-13 May, Rotterdam, The Netherlands

Sebesvari Z. et al. – in total 29 co-authors including myself (2016). Imperatives for sustainable delta futures. Brief for the Global Sustainable Development Report. Available at: https://sustainabledevelopment.un.org/content/documents/972032_Sebesvari_Imperatives%20for%20sustainable%20delta%20futures.pdf.

Szabo S., Brondizio E., Hetrick S., Matthews Z., **Renaud F.G.**, Nicholls R.J., Sebesvari Z., da Costa S., Dearing J.A., Foufoula-Georgiou E., Tejedor A. and Tessler Z. (2016): Populations dynamics in the context of environmental vulnerability: comparison of the Mekong, Ganges-Brahmaputra and Amazon delta regions. *ESRC Centre for Population Change, Working Paper 74*, 25p

Bhaduri A., Bogardi J., Siddiqi A., Voigt H., Vörösmarty C., Pahl-Wostl C., Bunn S., Shrivastava P., Lawford R., Foster S., Kremer H., **Renaud F.**, Bruns A., Rodriguez Osuna V. (2016): Sustainable Development Goals: A water perspective. Summary Report and Extended Recommendations of the Bonn Conference 2015. Indicators, Interlinkages and Implementation. Global Water Systems Project, 24p.

Kloos J., Asare-Kiey D., Pardoe J. and **Renaud F.G.** (2015): Towards the Development of an Adapted Multi-hazard Risk Assessment Framework for the West Sudanian Savanna Zone. *Working Paper No. 11*. United Nations University, Institute for Environment and Human Security, Bonn, 37p.

Schuster Wallace C.J., Qadir M., Adeel Z., **Renaud F.**, Dickin S.K. (2015): Putting Water and Energy at the Heart of Sustainable Development. United Nations University (UNU). Available from: http://inweh.unu.edu

Dudley N., Buyck C., Furuta N., Pedrot C., **Renaud F.**, Sudmeier-Rieux K. (2015): *Protected areas as tool for disaster risk reduction. A handbook for practitioners*. Ministry of Environment, Japan and IUCN, Gland, Switzerland, 45p.

Renaud F.G., Friedrich J., Sebesvari Z. and Giosan L. (2014): *Tipping points for delta socio-ecological systems*. In: INPRINT 2014/1, Land Ocean Interactions in the Coastal Zone (LOICZ), pp. 5-13

Renaud F. and Murti R. (2013): Ecosystems and disaster risk reduction in the context of the Great East Japan Earthquake and Tsunami – a scoping study. Report to the Keindanren Nature Conservation Fund. *Working Paper No. 10*. United Nations University, Institute for Environment and Human Security, Bonn, 50p.

Kloos J., Gebert N., Rosenfeld T. and **Renaud F.** (Eds.) (2013): Climate change, water conflicts and human security. Regional assessment and policy guidelines for the Mediterranean, Middle East and Sahel. Report No. 10, August 2013, United Nations Institute for Environment and Human Security, Bonn, 256p.

Pachova N.I., **Renaud F.G.**, Hirsch D., Anarbaev M., Mamatov T., Ergashev D., Olimov I. (2012): Towards sustainable land management in the Panir-Alai Mountains. *Policy Brief No.5*. United Nations University, Institute for Environment and Human Security, Bonn, 46p.

Uerschels D., Baier K., Azzam R., Sebesvari Z., **Renaud F.G.**, Ahmed S., and Jha R. (2011): Wasserversorgung von *Squatter*-Siedlungen in Hydrabad, Indien. *Geographische Rundschau 12:48-51*.

Renaud F.G., Bogardi J.J., Dun, O., and Warner K. (2007). Control, adapt or flee: How to face environmental migration? *InterSecTions No 5/2007*. United Nations University, Institute for Environment and Human Security, Bonn, 44p.

Renaud F. (2000): Book Review of. Schmidt Vogt, D. Swidden farming and fallow vegetation in northern Thailand. Geoecological Research, Vol. 8. Franz Steiner Verlag, Stuttgart. 373 pp., tables, figs, photos, loose maps. ISBN 3-515-07077-X. Journal of Biogeography 27(1): 230-231.

Renaud F., Ferguson J.A., Scott H.D. and Miller D.M. (1999): Estimation of seasonal rice evapotranspiration. AAES Research Series 476, pp.283-293.

Databases

Xu J, **Renaud** F.G., Barrett B. (2021): Land use maps under the trend, expansion, sustainability, and conservation scenarios in 2030 in the Luanhe River Basin, China by using the CLUMondo Model. NERC EOS Environmental Information Data Centre. https://doi.org/10.5285/a94640dc-fe21-4c38-936b-d62dfca0c952.

Xu J., Barrett B., **Renaud** F.G. (2021): Ecosystem types and their respective ecosystem services (ES) and disservices (EDS) in the Luanhe River Basin, China. NERC Environmental Information Data Centre. https://doi.org/10.5285/2252d8a4-0ef3-403f-b2c3-3f7acb5ac1d5.

Contributions to Unsigned United Nations Documents & Other Documents

UNFCCC (2021). Scoping paper on knowledge gaps in integrating forest and grassland biodiversity and ecosystems into adaptation strategies. 100 pp. Bonn. (Contribution as a Member of the Expert Group on Biodiversity and Adaptation and as Reviewer; acknowledged p. 5 and 58).

IUCN (2020): Guidance for using the IUCN Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of Nature-based Solutions. First edition. Gland, Switzerland: IUCN. (Contribution acknowledged p. ix).

IPCC (2019): IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H. O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. In press. Contributing Author to Chapter 4 "Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities, pp.321-445.

UN Environment (2017a): A Framework for Freshwater Ecosystem Management. Volume 1: Overview and country guide for implementation. UN Environment, Nairobi, Kenya (Contribution acknowledged p. iii and p. 29).

UN Environment (2017b): A Framework for Freshwater Ecosystem Management. Volume 2: Technical guide for classification and target-setting. UN Environment, Nairobi, Kenya (Contribution acknowledged p. ii).

World Bank (2017): Implementing nature based flood protection: Principles and implementation guidance. World Bank. Washington D.C. (Contribution acknowledged p. 4).

Aitsi-Selmi A. et al. (2016): Reflections on a Science and Technology Agenda for 21st Century Disaster Risk Reduction. *International Journal of Disaster Risk Science*: *DOI 10.1007/s13753-016-0081-x*. (Contributed text, Acknowledged p. 2).

UN Water (2013): Water security and the global water agenda. A UN-Water analytical brief. UNU-INWEH and UN-ESCAP, Hamilton, 47p. (Contributed text, Acknowledged p. iii).

Estrella M. and Saalismaa N. (2010): Demonstrating the Role of Ecosystem-based Management for Disaster Risk Reduction. In: Global Assessment Report on Disaster Risk Reduction 2011. UNISDR, 113 p. (Contribution acknowledged p. 3).

World Meteorological Organisation (2006): *Environmental Aspects of Integrated Flood Management*. WMO, Geneva, 71p. (Contributed text, acknowledged p. ix).

ANNEX 2: MAIN SECURED EXTERNALLY FUNDED PROJECTS

Grants obtained as Principal Investigator or Co-Investigator:

Notes:
When I was at UNU-EHS, I was the lead for the Institute for all the projects listed in this section.
An '*' implies that I lead the entire consortium (project PI).

Ongoing projects:

*ARR-Coast - Towards a green and inclusive post-pandemic recovery of the Blue Economy and coastal communities (2022-2025). Total budget approx. US$907,433, **University of Glasgow budget £320,115 (FEC)**. Funding from UKRI/Economic and Social Research Council. Grant Reference No: ES/X001121/1. Lead PI for the entire project.

Living Deltas Hub (2019-2024). Total budget of £15.2 million; **University of Glasgow - SoIS budget £567,483 (FEC)**, funding from UKRI-GCRF/Natural Environmen: Research Council (NERC). Grant Reference No: **NE/S008926/1**. Co-I and WP Co-Leader. https://gtr.ukri.org/projects?ref=NE%2FS008926%2F1 and https://www.livingdeltas.org/.

Finalised projects:

*Social and environmental impacts of the Covid-19 pandemic in Vietnamese provinces bordering China and Laos following border closure (2020-2022). Total budget £334,928; **University of Glasgow budget £236,999**. Funding from UKRI/GCRF/Engineering and Physical Sciences Research Council (EPSRC), Grant Reference No: **EP/V043218/1**. Website. https://gtr.ukri.org/projects?ref=EP%2FV043218%2F1.

OPERANDUM - OPEn-air laboRAtories for Nature baseD solUtions to Manage environmental risks (2018-2022). Total budget €12,257,343.75; **University of Glasgow budget €345,969**. Funding from the European Commission H2020 Programme, Grant Agreement No: 776848. Co-I and WP leader. Website: https://www.operandum-project.eu/.

*COP26 ASEAN climate policy report on Adaptation and Resilience (2021). **Total Budget of £5,000**. Funding from the British High Commission in Singapore. See final report at: https://www.gov.uk/government/publications/uk-singapore-cop26-universities-network-policy-reports

*End of project and Cost Allocation linked to the project "River basins as 'living laboratories' for achieving sustainable development goals across national and sub-national scales" – see below (2021). **Total Budget of £41,079, all for the University of Glasgow**. Funding allocated to Covid-affected projects by the University of Glasgow, through funds provided by the Engineering and Physical Sciences Research Council (EPSRC). Project No: 313402

*River basins as 'living laboratories' for achieving sustainable development goals across national and sub-national scales (2019-2021). Total budget of £323,319; **University of Glasgow budget £193,700**. Funding from the Natural Environment Research Council (NERC), Grant Reference No: NE/S012427/1. Websites: https://gtr.ukri.org/projects?ref=NE%2FS012427%2F1#/tabOverview and https://luanhelivinglab.home.blog/.

GlobeDrought – A global scale tool for the characterization of droughts, the quantification of their effects on water resources, crop productivity, trade in food products and the need for international food aid (2017-2020). Total budget €2.2 million, **UNU-EHS budget €370,806**. Funding from the German Federal Ministry for Education and Research (BMBF), Funding Grant #02WGR1457C. [NOTE: The lead role at UNU-EHS was transferred to another colleague on 10/2017 in anticipation of my departure from UNU-EHS].

DeltAdapt - Sustainable adaptation of coastal agro-ecosystems to increased salinity intrusion (2014-2018). Total budget €1.5 million, **UNU-EHS budget €490,000**. Funding from the German Federal Ministry for Education and Research (BMBF). Website. http://ehs.unu.edu/research/sustainable-adaptation-of-coastal-agro-ecosystems-to-increased-salinity-intrusion-deltadapt.html#outline. [NOTE: The lead role at UNU-EHS was transferred to another colleague on 11/2017 in anticipation of my departure from UNU-EHS for the last few months of project implementation].

WASCAL – West African Science Service Centre on Climate Change and Adapted Land Use – Consolidation Phase (2016-2017). Total budget €3.4 million, **UNU-EHS budget €74,000**. Funding from the German Federal Ministry for Education and Research (BMBF). Website: http://www.wascal.org/

EbA-Sourcebook – Development of a methodological guidance for applying the IPCC AR5 risk concept and vulnerability sourcebook methodology in the context of ecosystem-based adaptation – EbA (2017). Total budget €20,000; **UNU-EHS budget €10,010**. Funding from the German Corporation for International Cooperation (GIZ).

DELTAS – Catalyzing action towards sustainability of deltaic systems with an integrated modeling framework for risk assessment (2013-2016). Total budget €2.1 million, **UNU-EHS budget €179,250**. Funding from the German Science Foundation (DFG) through the Belmont Forum, Funding Grant #RE 3554/1-1. Website: http://www.delta.umn.edu/.

WASCAL – West African Science Service Centre on Climate Change and Adapted Land Use (2011-2016). Total budget ca. €50 million, **UNU-EHS budget €420,000**. Funding from the German Federal Ministry for Education and Research (BMBF), Funding Grant #01LG1202E. Website: http://www.wascal.org/.

*IWQGFS Phase 2 – Development of International Water Quality Guidelines for Ecosystems (2015-2016). **Total budget (all for UNU-EHS) US$149,700**. Funding from the United Nations Environment Programme (UNEP). Website: http://ehs.unu.edu/research/development-of-international-water-quality-guidelines-for-ecosystems-iwqges.html#outline.

KNOW 4 DRR – Enabling knowledge for disaster risk reduction in integration to climate change adaptation (2013-2015). Total budget €992,955, **UNU-EHS budget €103,790**. Funding from the European Commission Framework 7 Programme (EC-FP7). Website: http://www.know4drr.polimi.it/.

*IWQGES Phase 1 – Development of International Water Quality Guidelines for Ecosystems (2013-2014). **Total budget (all for UNU-EHS) US$205,200**. Funding from the United Nations Environment Programme (UNEP).

WISDOM Phase 2 - Water-related information system for the sustainable development of the Mekong Delta, Vietnam (2010-2014). Total budget €5.5 million, **UNU-EHS budget €1.1 million**. Funding from the German Federal Ministry for Education and Research (BMBF). Website: http://www.wisdom.eaf.dlr.de/.

CLICO – Climate change, hydro-conflict and human security (2010-2012). Total budget €3.7 million; **UNU-EHS budget €272,370**. Funding from the European Commission Framework 7 Programme (EC-FP7). Website: http://www.clico.org/.

WISDOM Phase 1 - Water related information system for the sustainable development of the Mekong Delta, Vietnam (2007-2010). Total budget €4.5 million; **UNU-EHS budget €1.1 million**. Funding from the German Federal Ministry for Education and Research (BMBF). Website: http://www.wisdom.eaf.dlr.de/.

Grants obtained at UNU-EHS that I supported (named in the proposal, contributing to the execution):

WANDEL - Water Resources as Important Factor for the *Energiewende* (global energy system transition) at Local and Global Scales (2017-2020). Total budget €2,552,049; **UNU-EHS budget €252,939**. Funding from the German Federal Ministry for Education and Research (BMBF), Funding Grant #02WGR1430D.

FloodAdaptVN (pre-phase) - Integrating Ecosystem-based Approaches into Flood Risk Management for Adaptive and Sustainable Urban Development in Central Vietnam (2017-2018). Total budget €39,955, **UNU-EHS budget €8,631**. Funding from the German Federal Ministry for Education and Research (BMBF), Funding Grant #01DP17055.

TelePAtH - Tipping Points of Food Security in coupled social-ecological systems of West Africa under Climatic Hazards – **Phase 1** (2017-2018). Total budget €291,446, **UNU-EHS budget €114,948**. Funding from the German Federal Ministry for Education and Research (BMBF)

GLASCA V – Changes in Glacier and Snow-melt runoff components in Central Asia and societal Vulnerability (2014-2017). Total budget €505,000, **UNU-EHS budget €12,600 (as Associated Partner)**. Funding from the VolkswagenStiftung.

GLASCA - Water Availability in Central Asia – Vulnerability to Changing Glacier (2015-2016). Total budget €140,000; **UNU-EHS budget €28,000**. Funding from the German Federal Ministry for Education and Research (BMBF).