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Chaire Innovation Senior à l'Institut Universitaire de France

UMR LIENSs 7266 - *Littoral, Environment and Societies*

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## CURRICULUM VITAE

### Professional experience and position

- Since 2006 Professor of Coastal Geography, La Rochelle University, La Rochelle, France  
1999-2006 Assistant Professor of Coastal Geography, University of La Réunion (South-Western Indian Ocean), France

### Education

- 2005 Accreditation to supervise research (HDR in French) in Geography - Title: *Geomorphology and management of coral beaches in south-western Indian Ocean Islands*, University of Paris IV-Sorbonne, Paris, France.  
1996-1998 PhD in Geography – Title: *Coral beaches and islands of the Seychelles Islands: from physical processes to beach and island management (Mahe, Praslin, La Digue and Desroches islands)*, University of La Réunion, Reunion Island, France.

### Fields of expertise

#### Thematic areas:

**Coastal geomorphology:** multidecadal changes in the configuration of atoll reef islands and high mountainous islands' beach-dune systems, including island and shoreline change assessment, impacts of and resilience to tropical cyclones and low-to-medium energy climate events (including marine inundation and flooding, impacts on shoreline position and coastal vegetation), interference of human activities with natural processes, reef-island interactions.

**Analysis of compound weather and climate events and their cascades of impacts:** critical analysis of the analysis of compound weather and climate events in the IPCC's AR6 WGI and WGII reports; development of a methodological framework to analyze compound events and their cascades of impacts, with applications to tropical small island; chains of impacts of tropical cyclones, distant-source wells, and ENSO phases; chains of impacts of climate change in various types of island environments (i.e. high mountainous and low-lying atoll reef islands; highly-modified vs. natural island environments).

**Trajectories of Exposure and Vulnerability of Small Islands to climate-related events and climate change:** assessment of (i) environmental change (i.e. shoreline change; change in the nature, dimensions and health of coastal and marine natural buffers), (ii) its drivers (climate-related, ecological and anthropogenic), and

(iii) the contribution of environmental change to the exposure and vulnerability of island communities to climate-related risks, (iv) analysis of the role of risk reduction and adaptation responses in changes in exposure and vulnerability, (v) reconstruction of long-term Trajectories of Exposure and Vulnerability of island countries and territories (e.g. Saint-Martin, Caribbean).

**Analysis of risk reduction and adaptation policies and measures:** reconstruction of past-to-present Trajectories of responses of small island countries and territories; evaluation of adaptation responses; analysis of nature-based coastal defence and relocation in tropical small islands.

#### **Study areas:**

**Indian Ocean islands:** French overseas territories, including Reunion Island and the Scattered Islands; small island countries, including Mauritius, Rodrigues, the Seychelles Islands, Mayotte, the Maldives, Comoros\*, and Madagascar\*

**Pacific Ocean islands:** French overseas territories, including French Polynesia, New Caledonia, Wallis and Futuna\*; small island countries, including Fiji\*, Kiribati, Tuvalu\*, Vanuatu\*

**Caribbean islands:** French overseas territories, including Saint-Martin, Saint-Barthélemy, Guadeloupe, Martinique; small island countries, including Anguilla, the British Virgin Islands, Dominica\*, Grenada\*, Jamaica\*, Trinidad and Tobago\*

\*Forthcoming (included in IUF project)

### **Current research projects**

2023-2026 ADAPTNAT (Assessing Ecosystem-based Adaptation projects in tropical small islands  
Funding: AFD (French Development Agency) (206 000 €) – Lead: V.K.E. Duvat (UMR LIENSs 7266) – Website: *under construction*.

The ADAPTNAT research project aims at questioning the risk reduction and adaptation benefits of Nature-Based Coastal Defence projects in tropical small islands, based upon the mapping and assessment of projects deployed in the south-western Indian Ocean. It will thereby contributes to local to regional capacity building in the area of ecosystem-based adaptation.

2022-2028 FUTURISKS (Past-to-FUTUre Coastal RISKS in Tropical French Overseas Island Territories: from impacts to solutions) – Funding: Priority Research Programme (PPR) on Ocean Solutions-ANR (French Research Agency) (2.4 M€) – Leads: V.K.E. Duvat and X. Bertin UMR LIENSs 7266); involves 17 partners – Websites: <https://futurisks.recherche.univ-lr.fr/>; <https://www.ocean-climat.fr/Les-actions-et-projets/Les-projets-de-recherche/FUTURISKS>

The FUTURISKS research project aims at assisting institutional and non-institutional actors in the implementation of coastal adaptation in French overseas territories of the Caribbean and Indian and Pacific Oceans. It comprises five Work Packages dedicated to (1) The analysis of coastal hazards and of the impacts of major climate-related events; (2) High resolution numerical modeling of marine flooding; (3) Past-to-future adaptation solutions; (4) The evaluation of uncertainty and its inclusion in adaptation policies; (5) Citizen science.

2022-2025 ADAPTON (Lessons learnt from the analysis of Nature-Based Coastal Defence in French Overseas Territories) – Funding: Fondation de France (150 000€) - Lead: V.K.E. Duvat (UMR LIENSs 7266); involves 5 partners – Website: <https://lienss.univ-larochelle.fr/ADAPTON-598>

The ADAPTON research project interrogates the risk reduction and adaptation benefits of Nature-Based Coastal Defence in tropical small islands, based upon the mapping and assessment of projects deployed in French overseas territories. It thereby contributes to local to national capacity building in the area of ecosystem-based adaptation.

## Past research projects

- 2016-2020 STORISK (*Small Islands addressing climate change: towards storylines of risk and adaptation*)  
– Funding: ANR (National Research Agency), 950,000 € - Coordinator: V.K.E. Duvat (UMR LIENSS 7266); interdisciplinary project involving 5 scientific partners – Website: <http://lienss.univ-larochelle.fr/storisk> ; <http://www.agence-nationale-recherche.fr/?Projet=ANR-15-CE03-0003>
- 2016-2020 INSeapTION (*Integrating SEA-level projections in climate services for coastal adaptation*)  
Funding: Europe, under the European Research Area for Climate Services ERA4CS (Topic A), 1,500,000 € - Coordinator: G. Le Cozannet (BRGM-Orléans, France); includes 6 partners (French Geological Survey; Global Climate Forum, Germany; Institute for Marine and Atmospheric Research, Utrecht, the Netherlands; CREOCEAN Private services company, France; Mediterranean Institute for Advanced Studies, Balearic Islands, Spain; UMR LIENSS 7266, University of la Rochelle-CNRS, France); Coordinator or Work Package 3 (French Polynesia case study): V.K.E. Duvat – <https://lienss.univ-larochelle.fr/InSEaption>
- 2016-2020 TIREX (*Dissemination of the lessons learnt from climate disasters for the enhancement of risk reduction and adaptation capacities in Caribbean small islands*, 517,000€ - Coordinator: F. Léone (University of Montpellier, France); includes 7 partners (UMR GRED, University of Montpellier 3-IRD; UMR LGP 8591 Paris I University-CRS; UMR 8053 LC2S University of the Antilles-CNRS, EA 4539 LARGE, University of the Antilles; Météo-France Antilles-Guyane; UMR LIENSS La Rochelle University-CNRS); Coordinator of Work Package 2 (Impacts of and resilience to the September 2017 tropical cyclones at different spatial and temporal scales): V.K.E. Duvat - <https://lienss.univ-larochelle.fr/TIREX-1567>

## International scientific responsibilities

### Contribution to IPCC and French IPCC focal point activities:

- Lead Author of the *Small Islands Chapter* (Chapter 15), WGII, IPCC AR6 (released in 2022)
- Contributing Author of the IPCC SROCC (Special Report on the Ocean and Cryosphere) (released in 2019)
- Lead Author of the *Small Islands Chapter* (Chap. 29), WGII, IPCC AR5 (released in 2014)
- 2012: Coordination of the French IPCC Focal Point Report on *The French overseas territories in the face of climate change* (report to the Prime Minister and Senate)

### Responsibilities in scientific journals:

Since 2020: member of the International Advisory Board of *Wiley Interdisciplinary Reviews: Climate Change* (WIREs Climate Change; IF: 10,07)

Since 2021: editor of the newly launched journal *Cambridge Prisms: Coastal Futures*

### Peer-reviewing:

*Anthropocene, Global and Planetary Change, Marine Policy, Regional Environmental Change, Geology, Journal of Coastal Research, Frontiers in Marine Science, Geophysical Research Letters, Biogeosciences, Sustainability Science, Anthropocene, Weather and Climate Extremes, Sustainability Science...*

### Consultancy (recent examples):

- 2020 GGCA+ project (European Union): training of institutional actors on coastal risk reduction and adaptation to climate change
- 2019 Assessment of coastal erosion at various tourist sites (Dominican Republic, Mauritius)

- 2016 Post Disaster Needs Assessment (PDNA), Farquhar Atoll, Seychelles Islands, category 5 Tropical Cyclone Fantala (April 2016), World Bank-EU-UN – In charge of environmental impacts
- 2016 Impacts of the *Climate Adaptation Programme in the Coastal Zone of Mauritius* on future tourism, Global Adaptation Fund – Expertise conducted on behalf of the Club Med Company.

## Current national scientific responsibilities

- 2022-28 Member of the Scientific Committee of the French Coastal Conservatory
- 2022-23 Member of the steering committee, International Festival of Geography, Saint-Dié 2010

## Qualifications and awards

- 2020 *Chevalier of the French Legion of Honor*, Ministry of Higher Education and Research
- 2020 Exceptional Class 1 Professor (National University Council)
- 2015 *Lauriers Nationaux Prize* of the Fondation de France & *Coup de Cœur Prize* of the Forum des Associations et Formations, for the research project VulnераRe
- 2014 *Literary award Jean Rostand* for the book “*Those islands that could disappear*” Le Pommier-Belin, Paris
- 2014 Nomination of the book “*Natural” disasters?*” for the Environmental Book Award and Political Ecology Book Award
- 2013 First Class Professor (National University Council)
- 2012 *Special Regional Research Innovation Award*, research project QUALIPLAGES
- 2011 *Scientific Excellence Award Level 1* (National University Council)
- 2005 Habitation, University Paris IV-Sorbonne, “*Geomorphology, development, and management of coral coasts in Southern Indian Ocean Islands*”, with unanimous summa cum laude
- 2004 Best scientific contribution, Regional Forum of Ocean Sciences, Mauritius
- 2000 Armand Rousseau Award for the book “*The coasts of Seychelles*”, L’Harmattan, Paris
- 1999 PhD in geography and development, La Reunion University, “*The coasts of Seychelles: from coastal dynamics to beach management*”, with unanimous summa cum laude
- 1991 Agregation in geography (rank: 8)
- 1990 CAPES (secondary-school teaching diploma) in history and geography

## Thesis supervision/examination

2008-2023: supervision of 8 PhD candidates, examination of 20 PhD theses and habilitations in France and Northern Ireland

## Main publications

### Selected peer-reviewed scientific papers

- HINKEL J., GARCIN M., GUSSMANN G., AMORES A., BARBIER C., BISARO A., LE COZANNET G., **DUVAT V.**, IMAD M., KHALEEL Z., MARCOS M., PEDREROS R., SHAREEF A., WAHEED A., 2023. Co-creating a coastal climate service to prioritise investments in erosion prevention and sea-level rise adaptation in the Maldives. *Climate Services* 31: 100401. <http://doi.org/10.1016/j.ciser.2023.100401>
- KLÖCK C., **DUVAT V.K.E.**, NUNN P., 2022. Maladaptive diffusion? The spread of hard protection to adapt to coastal erosion and flooding along island coasts in the Pacific and Indian Oceans. *Regional Environmental Change*. <http://doi.org/10.1007/s10113-022-01989-x>

- DUVAT V.K.E.**, MAGNAN A.K., GOELDNER-GIANELLA L., GRANCHER D., COSTA S., MAQUAIRE O., LE COZANNET G., STAHL L., VOLTO N., PIGNON-MUSSAUD C., 2022. Internal relocation as a relevant and feasible adaptation strategy in Rangiroa Atoll, French Polynesia. *Scientific Reports*, 12(14183). <https://doi.org/10.1038/s41598-022-18109-8>
- MAGNAN A.K., VIRIAMU T., MOATTY A., **DUVAT V.K.E.**, LE COZANNET G., STAHL L., ANISIMOV A., 2022. The climate change policy integration challenge in French Polynesia, Central Pacific Ocean. *Regional Environmental Change* 22: 76. <https://doi.org/10.1007/s10113-022-01933-z>
- MAGNAN A.K., ANISIMOV A., **DUVAT V.K.E.**, 2022. Strengthen climate adaptation research globally: more international incentives and coordination are needed. *Science*, 376(6600), 1398-1400. <https://doi.org/10.1126/science.abq0737>
- MAGNAN A.K., OPPENHEIMER M., GARSCHAGEN M., BUCHANAN M.K., **DUVAT V.K.E.**, FORBES L.D., 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*, 22(10677). <https://doi.org/10.1038/s41598-022-14303-w>
- MAGNAN A.K., PÖRTNER H.-O., **DUVAT V.K.E.**, GARSCHAGEN M., GUINDER V.A., ZOMMERS Z., HOEGH-GULDBERG O., GATTUSO J.-P., 2021. Global climate risk. *Nature Climate Change*. <https://doi.org/10.1038/s41558-021-01156-w>
- DUVAT V.K.E.**, VOLTO N., COSTA S., MAQUAIRE O., PIGNON-MUSSAUD C., DAVIDSON R., 2021. Assessing atoll island physical robustness: application to Rangiroa Atoll, French Polynesia. *Geomorphology* 390, 107871. <https://doi.org/10.1016/j.geomorph.2021.107871>
- MOATTY A., GRANCHER D., **DUVAT V.K.E.**, 2021. Leverages and obstacles facing post-cyclone recovery in Saint-Martin, Caribbean: between the ‘window of opportunity’ and the ‘systemic risk’. *International Journal of Disaster Risk Reduction* 63: 102453. <https://doi.org/10.1016/j.ijdrr.2021.102453>
- WU M., **DUVAT V.K.E.**, PURKIS S., 2021. Multi-decadal atoll-island dynamics in the Chagos Archipelago (Indian Ocean). *Global and Planetary Change*, 202, 103519. <https://doi.org/10.1016/j.gloplacha.2021.103519>
- NUNN P.D., KLÖCK C., **DUVAT V.K.E.**, 2021. Seawalls as maladaptations along island coasts. *Ocean & Coastal Management*, 205, 105504. <https://doi.org/10.1016/j.ocecoaman.2021.105554>
- DUVAT V.K.E.**, MAGNAN A.K., PERRY C.T., SPENCER T., BELL J.D., WEBB A., WHITE I., MCINNES K.L., GATTUSO J.-P., GRAHAM N.A.J., NUNN P.D., LE COZANNET G., 2021. Risks to future atoll habitability from climate-driven environmental changes. *Wiley Interdisciplinary Reviews Climate Change*, wcc 700 <https://doi.org/10.1002/wcc.700>
- **DUVAT V.K.E.**, VOLTO N., STAHL L., MOATTY A., DEFOSSEZ S., DESARTHE J., GRANCHER D., PILLET V., 2021. Understanding interlinkages between long-term trajectory of exposure and vulnerability, path dependency and cascading impacts of disasters in Saint-Martin (Caribbean). *Global Environmental Change*, 67, 102236. <https://doi.org/10.1016/j.gloenvcha.2021.102236>
  - MAGNAN A.K., SCHIPPER, L.E.F., **DUVAT V.K.E.**, 2020. Frontiers in climate change adaptation science: advancing guidelines to design adaptation pathways. *Current Climate Change Reports*. <https://doi.org/10.1007/s40641-020-00166-8>
  - MAGNAN A.K., **DUVAT V.K.E.**, 2020. Towards adaptation pathways for atoll islands. Insights from the Maldives. *Regional Environmental Change* 20, 119. <https://doi.org/10.1007/s10113-020-01691-w>
  - **DUVAT V.K.E.**, 2020. Human-driven atoll island expansion in the Maldives. *Anthropocene* 32, 100265. <https://doi.org/10.1016/j.ancene.2020.100265>
  - **DUVAT V.K.E.**, ANISIMOV A., MAGNAN A.K., 2020. Assessment of coastal risk reduction and adaptation-labelled responses in Mauritius Island (Indian Ocean). *Regional Environmental Change* 20, 110. <https://doi.org/10.1007/s10113-020-01699-2>

- ANISIMOV A., MAGNAN A., **DUVAT V.K.E.**, 2020. Strengths and gaps of coastal risk governance in Mauritius island, Indian Ocean. *Environmental Science and Policy* 108, 93-103. <https://doi.org/10.1016/j.envsci.2020.03.016>
- TEROROTUA H., **DUVAT V.**, MASPATAUD A., OURIQUA J., 2020. Assessing perception of climate change by decision-makers and designing coastal climate services: lessons learnt from French Polynesia. *Frontiers in Marine Science* 7, 160. <https://doi.org/10.3389/fmars.2020.00160>
- VOLTO N., **DUVAT V.K.E.**, 2020. Applying directional filters to satellite imagery for the assessment of tropical cyclone impacts on atoll islands. *Journal of Coastal Research* 36(4), 732-740. <https://doi.org/JCOASTRES-D-19-00153.1>
- **DUVAT V.K.E.**, PILLET V., VOLTO N., TEROROTUA H., LAURENT V., 2020. Contribution of moderate climate events to atoll island building (Fakarava Atoll, French Polynesia). *Geomorphology* 354. <https://doi.org/10.1016/j.geomorph.2020.107057>
- **DUVAT V.K.E.**, MAGNAN A., 2019. Rapid human-driven undermining of atoll island capacity to adjust to ocean climate-related pressures. *Scientific Reports* 9, 15129. <https://doi.org/10.1038/s41598-019-51468-3>
- **DUVAT V.K.E.**, STAHL L., COSTA S., MAQUAIRE O., MAGNAN A., 2020. Taking control of human-induced destabilisation of atoll islands: lessons learnt from the Tuamotu Archipelago, French Polynesia. *Sustainability Science* 15, 569-586. <https://doi.org/10.1007/s11625-019-00722-8>
- **DUVAT V.K.E.**, 2019. A global assessment of atoll island planform changes over the past decades. *WIREs Climate Change* 10, e557. <https://doi.org/10.1002/wcc.557>
- MARTINEZ-ASENSIO A., WÖPPELMANN G., BALLU V., BECKER M., TESTUT L., MAGNAN A.K., **DUVAT V.K.E.**, 2019. Relative sea-level rise and the influence of vertical land motion at Tropical Pacific Islands. *Global and Planetary Change* 176, 132-143. <https://doi.org/10.1016/j.gloplacha.2019.03.008>
- PILLET V., **DUVAT V.K.E.**, KRIEN Y., CÉCÉ R., ARNAUD G., PIGNON-MUSSAUD C., 2019. Contribution of human disturbances to the variability of the impacts of tropical cyclones Irma, José and Maria (September 2017) on St. Bartholomew Island's beaches. *Ocean & Coastal Management* 174, 71-91. <https://doi.org/10.1016/j.ocecoaman.2019.03.021>
- **DUVAT V.K.E.**, PILLET V., VOLTO N., KRIEN Y., CECE R., BERNARD D., 2019. High human influence on beach response to tropical cyclones in small islands: Saint-Martin Island, Lesser Antilles. *Geomorphology* 325, 70-91. <https://doi.org/10.1016/j.geomorph.2018.09.029>
- SALMON C., **DUVAT V.K.E.**, 2019. Human- and climate-driven shoreline changes in a remote Pacific island: Tubuai, French Polynesia. *Anthropocene* 25, 100191. <https://doi.org/10.1016/j.ancene.2019.100191>
- GOELDNER-GIANELLA L., GRANCHER D., MAGNAN A., DE BELIZAL E., **DUVAT V.**, 2019. The perception of decadal environmental changes and coastal risks in the Rangiroa and Tikehau atolls, French Polynesia: the role of sensitive and intellectual drivers. *Ocean and Coastal Management* 172, 14-29. <https://doi.org/10.1016/j.ocecoaman.2019.01.018>
- GOLDBERG M., **DUVAT V.**, 2019. Les facteurs locaux et mondiaux de la dégradation de l'environnement des îles coralliennes vus par la presse quotidienne française. *GéoCarrefour* 93(2), URL : <http://journals.openedition.org/geocarrefour/13070>, <https://doi.org/10.4000/geocarrefour.13070>
- COLLIN A., **DUVAT V.**, PILLET V., SALVAT B., JAMES D., 2018. Understanding the interactions between shorelines changes and reef outer slope morphometry on Takapoto atoll (French Polynesia). *Journal of Coastal Research*, Special Issue 85, 496-500. <https://doi.org/10.2112/SI85-100.1>
- LE COZANNET G., **DUVAT V.**, SALVAT B., ETIENNE S., TEROROTUA H., GARCIN M., LECACHEUX S., MONTAGGIONI L., 2018. Modelling the Response of Atoll Reef Islands to Multi-Millennial Sea Level Rise from the Last Glacial Maximum to the Coming 10kyr: the Case of Mururoa Atoll (Tuamotu, French Polynesia). *Journal of Coastal Research*, Special Issue No. 85, 16-20. <https://doi.org/10.2112/SI85-103.1>

- MAGNAN A.K., DUVAT V.K.E., 2018. Unavoidable solutions for coastal adaptation in Reunion Island (Indian Ocean). *Environmental Science & Policy* 89, 393-400. <https://doi.org/10.1016/j.envsci.2018.09.002>
- MAGNAN A.K., RANCHE M., DUVAT V.K.E., PRENVEILLE A., RUBIA F., 2018. L'exposition des populations des atolls de Rangiroa et de Tikehau (Polynésie française) au risque de submersion marine. *Vertigo* 18(3). URL : <http://journals.openedition.org/vertigo/23607>. <https://doi.org/10.4000/vertigo.23607>
- DUVAT V., MAGNAN A., CANAVESIO R., 2018. La variabilité des impacts des cyclones dans les atolls des Tuamotu (Polynésie française), *La Houille Blanche* 2, 13-21. <https://doi.org/10.1051/lhb/2018016>
- SALMON C., DUVAT V.K.E., 2018. Enjeux de l'intégration des espaces naturels littoraux dans la gestion des risques liés à la mer. *La Houille Blanche* 2, 5-12. <https://doi.org/10.1051/lhb/2018015>
- DUVAT V.K.E., MAGNAN A., 2017. Hurricanes: rescue natural Defences. *Nature*, vol. 550, 43, Oct. 5<sup>th</sup>
- DUVAT V.K.E., VOLTO N., SALMON C., 2017. Impacts of category 5 tropical cyclone Fantala (April 2016) on Farquhar Atoll, Seychelles Islands, Indian Ocean. *Geomorphology* 298, 41-62. <https://doi.org/10.1016/j.geomorph.2017.09.022>
- DUVAT V.K.E., SALVAT B, SALMON C., 2017. Drivers of shoreline change in atoll reef islands of the Tuamotu Archipelago, French Polynesia. *Global and Planetary Change* 158, 134-154. <https://doi.org/10.1016/j.gloplacha.2017.09.016>
- DUVAT V.K.E., PILLET V., 2017. Shoreline changes in reef islands of the Central Pacific: Takapoto Atoll, Northern Tuamotu, French Polynesia. *Geomorphology* 282, 96-118. <https://doi.org/10.1016/j.geomorph.2017.01.002>
- DUVAT V.K.E., MAGNAN A.K., WISE R.M., HAY J.E., FAZEY I., HINKEL J., STOJANIVIC T.A., YAMANO H., BALLU V., 2017. Trajectories of exposure and vulnerability of small islands to climate change. *WIREs Climate Change* wcc.478. <https://doi.org/10.1002/wcc.478>
- DUVAT V., MAGNAN A., ETIENNE S., SALMON C., PIGNON-MUSSAUD C., 2016. Assessing the impacts of and resilience to Tropical Cyclone Bejisa, Reunion Island (Indian Ocean), *Natural Hazards* 83: 601-640. <https://doi.org/10.1007/s11069-016-2338-5>
- TESTUT L., DUVAT V., BALLU V., MANUEL DA SILVA FERNANDES R., POUGET F., SALMON C., DYMENT J., 2016. Shoreline changes in a rising sea level context: the example of Grande Glorieuse, Scattered Islands, Western Indian Ocean. *Acta Oecologica* 72, 110-119. <https://doi.org/10.1016/j.actao.2015.10.002>
- MAGNAN A., DUVAT V., 2015. Phosphate mining risks atoll culture. *Nature*, vol. 522, p. 156, 11 June 2015.
- DUVAT V., 2013. Coastal protection structures in Tarawa Atoll, Republic of Kiribati. *Sustainability Science* 8(3): 363-379. <https://doi.org/10.1007/s11625-013-0205-9>
- DUVAT V., MAGNAN A., POUGET F., 2013. Exposure of atoll population to coastal erosion and flooding: a South Tarawa assessment, Kiribati. *Sustainability Science* 8(3): 423-440. <https://doi.org/10.1007/s11625-013-0215-7>

### Selected books and book chapters

- DUVAT V.K.E., MAGNAN A., 2019. Contrasting potential for nature-based solutions to enhance coastal protection services in atoll islands. In: C. Klöck & M. Fink (Eds.) *Dealing with climate change in small islands: towards effective and sustainable adaptation?* Göttingen University Press, Göttingen, pp. 45-75. <https://doi.org/10.17875/gup2019-1211>
- DUVAT V.K.E., MAGNAN A., 2019. Lessons from coastal risks governance on Reunion Island, Indian Ocean, France. In: I. La Jeunesse and C. Larrue (Eds). *Facing Hydro-meteorological extremes events in Europe: a governance issue.* Wiley & Sons Ltd, pp. 433-459. <https://doi.org/10.1002/9781119383567.ch26>

- HAY J.E., DUVAT V.K.E., MAGNAN A., 2019. Trends in vulnerability to climate-related hazards in the Pacific: research, understanding and implications. In: W.T. Pfeffer, J.B. Smith & K.L. Ebi (Eds.) *The Oxford Handbook of Planning for Climate Change Hazards*, Oxford University Press.  
Doi :10.1093/oxfordhb/9780190455811.013.45. URL :  
<https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780190455811.001.0001/oxfordhb-9780190455811-e-45>
- DUVAT V.K.E., 2017. *Will atolls reef islands disappear under climate change?* In: *The ocean revealed* (Eds A. Euzen, F. Gaill, D. Lacroix, Ph. Cury), *CNRS editions.* ISBN: 978-2-271-11907-0
- Nurse L., McLean R., Agard J., Briguglio L.P., Duvat-Magnan V., Pelesikoti N., Tompkins E., Webb A., 2014. *Small Islands*. In: *Climate Change 2014: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. *Cambridge University Press*, Cambridge, UK.
- DUVAT V.K.E., Magnan A., 2014. *Des catastrophes... "naturelles"?* Le Pommier-Belin, Paris, 311 p. ISBN: 978-2-7465-0679-4
- DUVAT V., 2013. *Séismes et volcanisme à la Réunion et aux Antilles*, pp. 66-67 ; *Les cyclones dans les Outre-Mer français*, pp. 68-69 ; *Les impacts du changement climatique dans les îles tropicales françaises*, pp. 72-73. In : *Atlas des risques en France : prévenir les catastrophes naturelles et technologiques* (Eds. Y. Veyret & R. Laganier). Autrement, Paris, 96 p., ISBN : 978-2-7467-3431-9
- DUVAT V. (coord.), 2012. *Les Outre-Mer face au défi du changement climatique*. Rapport au Premier Ministre et au Parlement publié par l'ONERC (Observatoire national des effets du réchauffement climatique), *La Documentation Française*, Paris, 216 p.
- DUVAT V.K.E., Magnan A., 2012. *Ces îles qui pourraient disparaître*, Le Pommier-Belin, Paris, 191 p.