

## Professor Dr. Pavel Kabat

### Annotated summary CV

September 2014

#### GENERAL INFORMATION

**DATE OF BIRTH:** 12 June 1958 (Prague)  
**Nationality & Citizenship:** Dutch/Netherlands

#### CURRENT POSITIONS:

*Director General and Chief Executive Officer, International Institute for Applied Systems Analysis (IIASA), Austria*

*Professor, Earth System Science and Climate Change Group, Wageningen University and Research Centre, the Netherlands*

*Founding Chair and Director, Royal Dutch Academy of Sciences and Arts, Institute for Integrated Research on Wadden Sea Region (KNAW-Wadden Academy)*

*Member, Leadership Council for the United Nations Sustainable Development Solutions Network*

*Founding Co - Chair and Director, High Level Alpbach - Laxenburg Group (<http://www.iiasa.ac.at/web/home/research/alg/Alpbach-Laxenburg-Group1.html>)*

#### EXPERTISE

Earth system science and global change  
Climate hydrology and water cycle  
Water resources and climate  
Land — atmosphere interactions and (terrestrial) biogeochemical feedbacks (measurements and modeling)  
Climate system and climate change

#### DISTINCTIONS

Academic and societal awards and distinctions received by Professor Kabat include 2007 Nobel Peace Prize (co- recipient of a group prize awarded to IPCC), The Zayed International Prize for the Environment (group award to the authors of the Millennium Ecosystem Assessment in 2006), and several honorary degrees, memberships and distinguished fellowships internationally.

In 2013, Professor Kabat was named by Her Majesty Queen Beatrix Knight in the Order of the Netherlands Lion, a national order of chivalry founded in 1815 by King William I, which recognizes excellence in the arts, science, sport, and literature.



#### QUALIFICATIONS

1986	PhD in Hydrology, Water Resources and Amelioration (cum laude)
1983	Advanced Programme Stochastic Hydrology and Water Resources (cum laude)
1982	MSc Hydrology and Water Resources (cum laude)
1977	Athenaeum B

#### CAREER

*2012 — present:* Director General and Chief Executive Officer, International Institute for Applied Systems Analysis (IIASA)

Founded in 1972, [IIASA](http://www.iiasa.ac.at) is an international research organization that conducts policy-oriented research into problems that are

too large or too complex to be solved by a single country or academic discipline. Located in Austria near Vienna, IIASA is sponsored by its [National Member Organizations](#) in Africa, Asia, Europe, and the Americas. IIASA's research investigates the critical issues of global environmental, economic, technological, and social change that we face in the twenty-first century. The researchers, some 200 mathematicians, social scientists, natural scientists, economists, and engineers, develop assessment and decision-support methodologies, global databases, and analytical tools to study the issues. IIASA concentrates its [research efforts](#) within three core research themes: (1) [Energy and Climate Change](#); (2) [Food and Water](#); and (3) [Poverty and Equity](#). Within these themes are programs that define the major research areas in which IIASA does its work. Other IIASA initiatives build capacity among junior researchers in systems analysis and include the [Young Scientists Summer Program](#) and [Postdoctoral Research](#).

**2008 — present:** Chair and Director, Royal Dutch Academy of Sciences and Arts (KNAW), Institute for Integrated Research on Wadden Sea Region

The [KNAW-Wadden Academy](#) is a new type of academic institute established to promote, facilitate, coordinate, and conduct transdisciplinary and integrated research of the Earth system at a regional scale. It involves climate, geology, ecology, water, spatial planning, economy, and cultural history. Established jointly by the Dutch Academy of Sciences and the Dutch Cabinet, the institute focuses on the trilateral Wadden region — an area of roughly 400 x 100 km spanning from north of the Netherlands over Germany and Denmark. The leading assumption behind establishing a new type of institute was that only integrated and transdisciplinary approaches addressing the system in a holistic way will provide the necessary answers for the future development of this region. The area faces a key challenge of sustainable development: how to combine the economic functions (e.g., fisheries, harbors/transport, energy, tourism) with the preservation of unique natural values (Wadden inter-tidal system recently gained UNESCO heritage status), in the context of changing exogenous drivers (climate change/sea level rise, EU directives, globalization). The institute operates with a budget of €1 million per year for its core and coordinating activities, and with a portfolio of projects of approximately €25 million conducted by research consortia formally associated with the Wadden Academy and subject to its integrated regional research framework.

**2006 — present:** Full Professor and Chair, Earth System Science and Climate Change Group, Wageningen University and Research Centre

As full professor and chair, I was responsible for a group of about 70 scientists including 25 PhD students. My group — [Earth System Science and Climate Change](#) (ESS CC) — aimed to advance our understanding of the Earth and Climate System as a complex and holistic system, with specific inclusion of the anthropogenic and human components. Properties and processes of the components of the Earth System, such as carbon and water cycles in the terrestrial and atmospheric compartments, were investigated as integral parts of the entire system, focusing on their interactions and feedbacks. ESS CC develops innovative methods and tools (both observational and modeling), with the common aim of advancing scientific understanding, as well as supporting policies and strategic decision-making processes in the field of climate, water, and the environment. The average yearly budget of the group was €7 million, with 65% of the income originated through competitive (inter)national grants, from sources such as the Dutch Science Foundation and the EU Framework Programmes. The ESS CC group was evaluated as "excellent" in two consecutive evaluation rounds by independent international review committees in 2007 and 2010. As a primary supervisor and leading professor, I have supervised over 40 PhD students, of whom 8 successfully finished their PhDs during the 2012-2014 period. All PhD theses under my supervision have consisted of at least 4 peer reviewed articles in leading science journals.

**2004 — 2012:** Science Director and Programme Council Chair, Dutch National Climate Research Programme; Vice-Chair, Dutch National Climate Facility

Climate change affects all segments and sectors of society and the economy in the Netherlands, but it also brings new opportunities for major innovation. Examples include: opportunities to (re)develop a country's infrastructure to emit lower greenhouse gas emissions; to enhance land-use opportunities with respect to sources and sinks of greenhouse gases; to increase adaptive capacity in the management of agriculture, natural resources, and water; and to enhance the protection of our infrastructure and thus the safety of our people. Meeting this challenge calls for a major investment in knowledge development and knowledge infrastructure. For the period between 2005 and 2014, two large research programmes have been initiated and funded in the Netherlands in response to this challenge: "Climate changes Spatial Planning" (CcSP) and "Knowledge for Climate" (KfC) ([www.climate-research-netherlands.nl](http://www.climate-research-netherlands.nl)). Both programmes are supported by the Dutch Government from an Economic Structure Enhancing Fund (FES), providing funding of €90 million, and by participating organizations and stakeholders, which bring in an additional €110 million. The programmes are built around the principles of "Climate proofing" ([Kabat et al, 2005. Climate Proofing The Netherlands. Nature, 438, 283-284](#)).

Climate proof development does not mean zero-risk, which would not be a realistic or economically viable approach for any country or region in the world. Our programmes embrace the climate proofing concept as a combination of (i) targeted, new "hard" infrastructural adaptation measures as well as mainstreaming climate change into other infrastructural developments, (ii) risk management and coping strategies that rely on mainly the "soft" sectors and measures, like banks/insurers, legislation schemes, governance and institutional transitions in spatial planning, and (iii) opportunities for technological, institutional, and societal innovations. Both research programmes generate internationally competitive scientific results. At the same time, a major goal of both programmes is to enhance joint learning between science and practice in coping with climate issues in local, regional, and (inter)national developments, both in the public and private domains. Both programmes recognize that the benefits of climate research arise from direct engagement and applications by the stakeholders.

**2007 — 2010:** Dutch Cabinet Appointed Member of the "Delta Committee"

The [Delta committee](#) is a high level state committee that advises the Dutch Cabinet on fundamental restructuring and refitting of the national water infrastructure and coastal flood protection system in view of sea level rises, climate change and socio-economic developments up to 2100. The final advice (e.g., [Kabat P., Fresco L.O., Stive M.J.F., Veerman C.P., van Alphen J., Parmet B., Hazeleger W. and Katsman C.A. 2009. Dutch coasts in transition. Nature Geoscience 2: 450-452](#)) was considered as an international breakthrough in a "win-win" concept of climate adaptation strategies, combined with explicit inclusion of uncertainties which are inherent to future (climate) scenarios. The advice was fully adopted by the Dutch Cabinet and a new law ("Delta Law") has been passed securing a funding of €1 billion a year until 2100 for the implementation of the Delta Programme. In the aftermath of the Dutch Delta Committee, several international and collaboration activities have been established in which I was involved, including a US congressional hearing; a scientific briefing to the city of New Orleans and to the Governor of California; a scientific briefing to the Government of Bangladesh and to the Asian Development Bank; invited

lectures for Greater London Authority, City of New York, Cities of Shanghai, Taipei and Tokyo, Japanese Science Council and several others. Most recently, an international "Mekong Delta Committee" was established by a joint decree of the Dutch and Vietnamese government.

**2000 — 2012: Chair of the Board and Director, Wageningen Climate Change and Biosphere Research Centre (CCB Wageningen UR)**

[CCB Wageningen UR](#) is a "thematic expertise centre of excellence" with the aim to operate across different departments, university groups and institutions within the Wageningen University and Research Centre. It is the formalization of a long-time collaboration between Wageningen University (WU) and several institutes of the Agricultural Research Department in the field of biospheric and socioeconomic aspects of climate change and land use. Both organizations invest over 65 person years per annum into research in this field. Scientific challenges addressed by the CCB-research programme include the study of the feedbacks between vegetation, land use, and regional climate in order to improve our understanding of the future, especially with regard to the implications of climate change for land use planning, ecosystem management, and the development of environmental policies.

**2003 — 2006: Professor / Endowed Chair of Climate Hydrology, Wageningen UR**

Endowed professorship at the Department of Meteorology and Air Quality of the Wageningen University ([www.maq.wur.nl](http://www.maq.wur.nl)), in combination with the Head and Senior Researcher at Alterra Wageningen UR.

**1988 — 2006: Head and Senior Researcher, Department of Agrohydrology and Land Atmosphere Interactions, Winand Staring Centre for Integrated Land, Soil and Water Management Research (SC – DLO), Wageningen (from 2000 on: Alterra Wageningen UR)** See also:

[http://content.alterra.wur.nl/webdocs/internet/corporate/werken%20bij/medewerkers/Engels/ALTERRA\\_BOEK\\_Kabat\\_EN.pdf](http://content.alterra.wur.nl/webdocs/internet/corporate/werken%20bij/medewerkers/Engels/ALTERRA_BOEK_Kabat_EN.pdf)

**1997 — 2006: Programme Director and Principle Investigator, Research Programme on "Climate, Water and Land Use Change" of the Ministry of Agriculture, Nature Management and Fisheries**  
A programme with yearly budget of €2 million consisting of 10 to 15 thematically interlinked projects.

**1986 — 1988: Post-doc, research scientist and project leader at Institute for Land and Water Management (ICW), Wageningen, the Netherlands.**

#### **International positions (selected):**

**2001 — 2009: Science Director, International Dialogue on Water and Climate and International Cooperative Programme on Water and Climate (UNESCO/WMO/World Water Council)**

International Dialogue on Water and Climate (2001–2005), followed by Cooperative Programme on Water and Climate (2006–2010) — [www.waterandclimate.org](http://www.waterandclimate.org) — were established as a non-governmental organization jointly supported by UNESCO, World Meteorological Organization, World Water Council, and the Dutch Government. The aim was to address the role and increasing importance of climate variability and climate change in the water sector and to conduct scientifically sound advocacy for a more focused approach towards inclusion of climate change in water infrastructure planning and water management. The programmes were successful at several levels: (i) bringing the issue of climate-water-development in relation to the Millennium Development Goals on to the agenda of WSSD in Johannesburg in 2002; (ii) addressing both science and ministerial segments of the World Water Forums in Kyoto (2003), Mexico (2006), and Istanbul (2009) (see e.g., **Kabat, P, and H. van Schaik, 2003. *Climate changes the water rules: How water managers can cope with today's climate variability and tomorrow's climate change.* 120 p, ISBN 90-327-0321**); (iii) establishing the practice of climate and water dialogues in more than 30 regional situations around the world, and publishing a guidance book (see **Ludwig, F. P. Kabat, H. van Schaik and M van der Valk, 2009. *Climate Change Adaptation in the Water Sector.* Earth Scan Publishers, 304 p.; ISBN: 9781844076529**) and (iv) making a successful proposal for the IPCC's Technical Paper on Climate Change and Water (published by IPCC in July 2008).

**2004 — 2010: Chair, International Scientific Steering Committee of the [International Geosphere Biosphere Programme](#) (IGBP) — core project [Integrated Land Ecosystem Atmosphere Process Study](#) (ILEAPS)**

**1994 — 2010: Member, Science Committee of the IGBP**

**1994 — 2003: Chair, International Science Steering Committee of IGBP core project [Biospheric Aspects of the Hydrological Cycle](#) (BAHC) programme/core project**

**1997 — 2006: Chair, International Science Panel of the International Satellite Land Surface Climatology Project (ISLSCP) of the World Climate Research Programme (WCRP); and a member of the Scientific Steering Group of the Global Energy and Water Experiment ([www.gewex.org/islscp.html](http://www.gewex.org/islscp.html); [www.gewex.org](http://www.gewex.org); [www.wcrp-climate.org](http://www.wcrp-climate.org).)**

The above positions mark my more than 15 years' involvement in the steering of international global change and earth system/climate research programmes. In particular, my joint chairmanship of the IGBP project (BAHC) and of the WCRP project (ISLSCP) which I assumed back in 1997 contributed substantially to building much needed scientific and programmatic synergies between both programmes and to the development of a more integrative approach towards climate research. It was BAHC and ISLSCP/GEWEX that initiated a series of multi-agency-funded, large-scale, land-atmosphere experiments around

the world's most typical biomes, and that gradually brought hydrology, land use change, carbon, and biogeochemistry on to an "equal footing" with meteorology and oceanography in climate system and climate change research. See e.g.,

**Kabat, P. and P.J. Sellers, 1997. Aggregated Descriptions of Heterogeneous Land Covers. Journal of Hydrology. Vol. 190/3-4.**

**Steffen, P. Kabat, & others, 1998: The Terrestrial Carbon Cycle: Implications for the Kyoto Protocol. Science. (280), 1393-1394.**

**Tenhunen, J.D. and P. Kabat, 1999. Integrating hydrology, ecosystem dynamics and biogeochemistry in complex landscapes.**

**J. Wiley and Sons. UK: 367 pp.**

**Kabat, P., M. Claussen, P.A. Diemeyer, J.H.C. Gash, L. Bravo de Guenni, M. Meybeck, R. A. Pielke Sr., Ch.J. Vorosmarty, R.W.A. Hutjes and S. Lutkemeier, 2004. Vegetation, Water, Humans and the Climate: A New Perspective on an Interactive System. Springer Verlag, Berlin/New York; 566 p, ISBN 3540424008.**

**1990 — 2005:** Co-Initiator / Co-Chair and Principal European Investigator of several Large Scale Earth System Experiments under the auspices of WCRP and IGBP and multiagency funded  
Includes: (i) EFEDA — Mediterranean (1990–1994, European Commission-EC and NASA); (ii) HAPEX — Sahel (1992–1994, EC, NASA, French Government), (iii) FLUXNET (2000–ongoing; EC, NASA, NASDA and several national agencies in Europe, Asia and South America) and (iv) LBA — Large Scale Biosphere — Atmosphere Experiment in Amazonia — LBA (1995–2005; EC, NASA, Brazilian Government).

**1994 — 2011:** Principal Investigator in 25+ (European Commission) EC supported research projects  
In the area of global change, earth system science and water cycle/ water management. Eleven projects as overall EU coordinator.  
Currently running 11 large EU Integrated Research Projects addressing predominantly climate and water cycle.

## **SCIENTIFIC PERFORMANCE**

Author and (co-)author of over 300 refereed publications, including 9 books, member of 3 international editorial boards, and (co)editor of four special issues of peer reviewed international journals. The Group I am currently leading as a Full Professor (Chair, [Earth System Science and Climate Change Group](#) at Wageningen University and Research Centre;) was evaluated as "excellent" in the last two consecutive evaluation rounds by independent international review committees in 2007 and 2010. We publish in high-impact journals (including *Nature*, *Science*, *PNAS*, *Geophysical Research Letters*, *Journal of Climate*, *Water Resources Research*), with frequent citations. One of the recent bibliometric analyses performed for my group revealed that over the period 2001–2010 we published over 450 refereed scientific papers, of which 220 were in A-category journals. 88 of the 220 A-category journal publications belonged to the 10% most highly cited publications, which is 40% of total A-category publications. The relative impact of our publications was far above world average (3.83 compared to world average of 1.0).

## **Selected Publications (to September 2014)**

### **2014**

Biesbroek G.R., Termeer C.J.A.M., Klostermann J.E.M., **Kabat P.** 2014. Analytical lenses on barriers in the governance of climate change adaptation, *Mitigation and Adaptation Strategies for Global Change*, 19(7):1011-1032

Biesbroek G.R., Termeer C.J.A.M., Klostermann J.E.M., **Kabat P.** 2014. Rethinking barriers to adaptation: Mechanism-based explanation of impasses in the governance of an innovative adaptation measure, *Global Environmental Change*, 26:108-118

Braakhekke M.C., Beer C., Schrumpf M., Ekici A., Ahrens B., Hoosbeek M.R., Kruijt B., **Kabat P.**, Reichtsein M. 2014. The use of radiocarbon to constrain current and future soil organic matter turnover and transport in a temperate forest. *Journal of Geophysical Research: Biogeosciences*, 119(3): 372-391

Braga B., Chartres C., Cosgrove W.J., da Cunha L.V., Gleick P.H., **Kabat P.**, Kadi M.A., Loucks P.D., Lundqvist J., Narain S., Xia J., 2014. *Water and the Future of Humanity: Revisiting Water Security*. Calouste Gulbenkian Foundation, Springer International

Schellnhuber J.H., Frieler K., **Kabat P.** 2014. *Global Climate Impacts: A Cross-Sector, Multi-Model*

Assessment Special Feature. *PNAS*, 111(9):3225-3297

Schellnhuber J.H., Frieler K., **Kabat P.** 2014. The elephant, the blind, and the intersectoral intercomparison of climate impacts. *PNAS*, 111 (9): 3225–3227, doi: 10.1073/pnas.1321791111

Schewe J., Heinke J., Gerten D., Haddeland I., Arnell N., Frieler K., Piontek F., Warszawski L., **Kabat P.** 2014. Multimodel assessment of water scarcity under climate change, *PNAS*, 111 (9):3245-3250

Seiler C., Hutjes R.W.A., Kruijt B., Quispe J., Anez S., Arora V.K., Melton J. R., Hickler T. **Kabat P.** 2014. Modeling forest dynamics along climate gradients in Bolivia, *Journal of Geophysical Research: Biogeosciences*, 119(5):758-775

Siderius C., Boonstra H., Munaswamy V., Ramana C., **Kabat P.**, van Ireland E. C., Hellegers P. 2014. Climate-smart tank irrigation: A multi-year analysis of improved conjunctive water use under rainfall variability, *Agricultural Water Management*, 148:52-62

Siderius C., Hellegers P.J.G.J., Mishra A., van Ireland E.C., **Kabat P.** 2014. *Sensitivity of the agroecosystem in the Ganges basin to inter-annual rainfall variability and associated changes in land use*, *International Journal of Climatology*, 34 (10):3066-3077

Veraart A.J., van Nieuwaal K., Driessen P.P.J., **Kabat P.** 2014. From climate research to climate compatible development: Experiences and progress in the Netherlands, *Regional Environmental Change*, 14(3):851-863

## 2013

Biemans H., Speelman L.H., Moors E.J., Wiltshire A.J., Kumar P., Gerten D., **Kabat P.** 2013. Future water resources for food production in five South Asian river basins and potential for adaptation – A modeling study. *Science of the Total Environment*, 468-469

Biesbroek G.R., Klostermann J.E.M., Termeer C.J.A, **Kabat P.** 2013. On the nature of barriers to climate change adaptation. *Regional Environmental Change*, 13(5): 1119-1129

Seiler C., Hutjes R.W.A, **Kabat P.** 2013. Climate variability and trends in Bolivia. *Journal of Applied Meteorology and Climatology*, 52(1):130-146

Seiler C., Hutjes R.W.A., **Kabat P.** 2013. Likely ranges of climate change in Bolivia. *Journal of Applied Meteorology and Climatology*, 52 (6):1303-1317

van Vliet M.T.H, Franssen W.H.P., Yearsley J.R., Ludwig F., Haddeland I., Lettenmaier D.P., **Kabat P.** 2013. Global river discharge and water temperature under climate change. *Global Environmental Change*, 23(2):450-464

van Vliet M.T.H., Ludwig F., **Kabat P.** 2013. Global streamflow and thermal habitats of freshwater fishes under climate change. *Climatic Change*, 121 (4):739-754

## 2012

Janssen R.H.H., Vila-Guerau De Arellano J., Ganzeveld L.N., **Kabat P.**, Jimenez J.L., Farmer D.K., van Heerwaarden C.C., Mammarella I. 2012. Combined effects of surface conditions, boundary layer dynamics and chemistry on diurnal SOA evolution. *Atmospheric Chemistry and Physics*, 12(15):6827-6827

**Kabat P.**, Bazelmans J., van Dijk J., Herman P.M.J, van Oijen T., Pejrup M., Reise K., Speelman H., Wolff W.J. 2012. The Wadden Sea Region: Towards a science for sustainable development. *Ocean &*

**Kabat, P.** 2012. Systems science for policy evaluation. *Science*, 336 (6087):1398

Supit I., van Diepen C.A., de Wit A.J.W., Wolf J., **Kabat P.**, Baruth B., Ludwig F., 2012. Assessing climate change effects on European crop yields using the Crop Growth Monitoring System and a weather generator. *Agricultural and Forest Meteorology*, 164:96-111

van Pelt S.C., Beersma J.J., Buishand T.A., van den Hurk B.J.J.M., **Kabat P.** 2012. Future changes in extreme precipitation in the Rhine basin based on global and regional climate model simulations. *Hydrology and Earth System Sciences*, 16(12):4517-4530

van Vliet M.T.H., Yearsley J.R., Franssen W.H.P, Ludwig F., Haddeland I., Lettenmaier D.P., **Kabat P.** 2012. Coupled daily stream flow and water temperature modelling in large river basins. *Hydrology and Earth System Sciences*, 16(11):4303-4321

van Vliet M.T.H., Yearsley J.R., Ludwig F., Voegelé S., Lettenmaier D.P., **Kabat P.** 2012. Vulnerability of US and European electricity supply to climate change. *Nature Climate Change* 2(9):676-681

## 2011

Braakhekke M.C., Beer Ch., Hoosbeek M. R., Reichstein M., Kruijt B. **Kabat P.** 2011. SOMPROF: A vertically explicit soil organic matter model for global applications. *Ecological Modelling*, 222(10), 1712-1730. doi:10.1016/j.ecolmodel.2011.02.015.

Haddeland I., Clark B., **Kabat P.** et al. 2011. Multi-model estimate of the global terrestrial water balance: Setup and first results. *Journal of Hydrometeorology* 12, 869–884. doi: <http://dx.doi.org/10.1175/2011JHM1324.1>

Janssen, R.H.H., Ganzeveld L.N., **Kabat P.**, Kulmala M., Nieminen T., Roebeling R. 2011. Estimating seasonal variations in cloud droplet number concentration over the boreal forest from satellite observations, *Atmos. Chem. Phys.* 11, 9999-10029, doi:10.5194/acpd-11-9999-2011.

## 2010

Biemans H., Haddeland I., **Kabat P.**, Ludwig F., Hutjes R. W.A., Heinke J., von Bloh W., Gerten D. 2010. Impact of reservoirs on river discharge and irrigation water supply during the 20th century. *Water Resources Research*, 47(3). doi:10.1029/2009WR008929

Krysanova V., Buiteveld, H., Moreno E. de Pedraza Carrera, J., Slámová R., Martínková M., Blanco I., Esteve P., Pringle K., Pahl-Wostl C., **Kabat P.** 2010. Cross-comparison of climate change adaptation strategies across large river basins in Europe, Africa and Asia. *Water Resources Management*, 0920-4741 (Print) 1573-1650 (Online); doi 10.1007/s11269-010-9650-8

Stolk P.C., Hendriks R.F.A., Jacobs C.M.J., Duijzer J., Moors E.J., van Groenigen J.W., Kroon P.S., Schrier-Uijl A.P., Veenendaal E.M., **Kabat P.** 2011. Simulation of daily N<sub>2</sub>O emissions from managed peat soils. *Vadose Zone Journal*, 10 (1):156-168.

Supit I, van Diepen C.A., de Wit A.J.W, **Kabat P.**, Baruth B., Ludwig, F. 2010. Recent changes in the climatic yield potential of various crops in Europe. *Agricultural Systems*, doi: 10.1016/j.agsy.2010.08.009

Tuinenburg O.A., Hutjes R.W.A., Jacobs C.M.J., **Kabat P.** 2010. Diagnosis of local land-atmosphere feedbacks in India. *Journal of Climate*, 24, 251-256. doi:10.1175/2010JCLI3779.1

van Vliet M.T.H., Ludwig F., Zwolsman G.J.G., Weedon G.P., **Kabat P.** 2010. Global river temperatures and the sensitivity to atmospheric warming and changes in river flow, *Water Resources Research*, doi:10.1029/2010WR009198

Vellinga O.S., Hutjes R.W.A., Elbers J.A., Holtslag A.A.M., **Kabat P.** 2010. Regional carbon dioxide and energy fluxes from airborne observations using flight-path segmentation based on landscape characteristics. *Biogeosciences*: 7, 1307–1321

Veraart J., van Ierland E.C., Werners S.E., Verhagen A., de Groot R.S., Kuikman P., **Kabat P.** 2010. Climate change impacts on water management and adaptation strategies in the Netherlands: stakeholder and scientific expert judgments. *Journal of Environmental Policy and Planning*, 12 (2010)2. ISSN 1523-908X, p. 179–200

## 2009

Bejene T., D.P. Lettenmaier, **Kabat P.** 2009. Hydrologic impacts of climate change on the Nile River Basin: Implications of the 2007 IPCC climate scenarios, *Climatic Change*, doi 10.1007/s10584-009-9693-0

Biemans H., Hutjes R.W.A., **Kabat P.** et al. 2009. Effects of precipitation uncertainty on discharge calculations for main river basins. *Journal of Hydrometeorology* 10: 1011-1025

Hari P, Andreae MO, **Kabat P.**, Kulmala M., 2009. A comprehensive network of measuring stations to monitor climate change. *Boreal Environmental Research* 14 (4):442-226

**Kabat P.**, Fresco L.O., Stive M.J.F., Veerman C.P., van Alphen J., Parmet B., Hazeleger W., Katsman C.A. 2009. Dutch coasts in transition. *Nature Geoscience* 2: 450-452

Ludwig F., **Kabat P.**, van Schaik H., van der Valk M, 2009. *Climate change adaptation in the water sector*. Earthscan, 304 p.; ISBN: 9781844076529

Oost A, **Kabat P.**, Wiersma A, Hofstede J. 2009. Wadden Sea Quality Status Report 2009. Chapter 3 Climate . [www.waddensea-secretariat.org/QSR-2009/index.htm](http://www.waddensea-secretariat.org/QSR-2009/index.htm)

Rietkerk M., Brovkin V. van Bodegom P. M., Claussen M., Dekker S. C., Dijkstra. A., Goryachkin S. V., **Kabat P.**, van Nes E. H., Neutel A.-M., Nicholson S. E., Nobre C., Petoukhov V., Provenzale A., Scheffer M., Seneviratne S. I. 2009. Local ecosystem feedbacks and critical transitions in the climate. *Biogeosciences Discuss.*, 6, 10121–10136

Stehfest E., **Kabat P.** et al. 2009. Climate benefits of changing diet. *Climatic Change*, DOI 10.1007/s10584-008-9534-6

Van Pelt S. C., **Kabat P.**, ter Maat H. W., van den Hurk B. J. J. M., Weerts, A. H. 2009. Discharge simulations performed with a hydrological model using bias corrected regional climate model input, *Hydrol. Earth Syst. Sci.*, 13, 2387-2397

## 2008

**Kabat P.**, Hazeleger W., Katsman C., Sterl A., Beersma J., Klein Tank A., Vellinga, P., Hutjes R., Swart R. 2008. The climate and sea level rise scenarios used by the Delta Committee: Explanatory note. 2008. In: Final Report of the Delta Committee on coastal flood protection system and the Dutch delta water infrastructure in a view of sea level rise, climate change, and socio-economic developments; Appendix 3, 11 pages ([www.deltacommissie.com](http://www.deltacommissie.com))

Kämäri J., Alcamo J., Bärlund I., **Kabat P.**, Kok K. 2008. Envisioning the future of water in Europe - the SCENES project. *E-Water: official publication of the European Water Association (EWA)* (2008). - ISSN 1994-8549, p. 1–28.

Veerman C., **Kabat P.**, Stive M.J.F., Fresco L.O., Bakker I.M., van Duijn J.J., Heidema A.P., Metz T., van Oord J.G., Parmet B.W.A.H.. 2008. *Final Report of the Delta Committee on coastal flood protection and the Dutch delta water infrastructure in a view of sea level rise, climate change, and socio-economic developments*. [www.deltacommissie.com/en/advies](http://www.deltacommissie.com/en/advies)

## 2007-2000

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Feddes R.A. **Kabat P.** et al 1988. Modelling soil water dynamics in the unsaturated zone — State of the art. *Journal of Hydrology* 100: 69-111

#### **Membership editorial boards of international scientific journals (2001-2010)**

*Global Environmental Change* (GEC) Member of the Editorial Board

*Hydrology and Earth System Sciences* (HESS) Co-Editor Hydrology and Climate Processes, Member Editorial Board

*Surveys in Geophysics* Member of the Editorial Board.

*Journal of Hydrology* Guest Editor

*Current Opinion in Environmental Sustainability* Member Editorial Board

#### **Membership academic, advisory and review boards & contribution to other international scientific organizations and programmes (selection 2001-2010)**

*Member*, Belmont Regional Earth System Panel appointed by International Council of Scientific Unions (ICSU) (2010 on)

*Vice Chair*, Academic Board, Chinese CAS institute of Water Research (2005-2010)

*Member*, International Advisory Board of the German National Climate Service Center (2011 on)

*Member*, Gulbenkian Foundation International Think Tank on Global Water Scenarios (2010 -2012)

*Vice Chair*, International Science Steering Committee, ESSP MAIRS programme (China + SE Asia)

*Member*, International Science Advisory Panel RECLIM programme (Germany) (2010 onwards)

*Member*, International Science Advisory Board of the NSF National Center on Earth Surface Dynamics (NCED) (University of Minnesota, USA) (2011)

*Chair*, International Science Advisory and Evaluation Panel, Institute for Climate and Global Change Research, Nanjing University, China (2010 on)

*Member*, International Science Advisory and Evaluation Panel, Nagoya Earth System Science Center (SELS), Japan (2008 and 2010)

*Member*, Science Advisory and Evaluation Board to the Centre of Excellence of the Finish Academy of Sciences 2007-2012; appointed by Finish Academy of Sciences (2009 – 2014)

*Member*, Scientific Advisory and Review Board of the Slovak Academy of Sciences (2006)

*Member (invited)*, International Advisory Board of the Max Planck Institute for Meteorology, (MPI Hamburg) 2007-2011 (appointed by Max Planck Society)

*Member*, Science Board of COSMOS EU Earth System Initiative

*Member*, ENES steering board (European Network on Earth System Modelling)

*Elected Member*, Royal Meteorological Society, London, UK (since 1994)

*Member*, American Geophysical Union (AGU)

*Member*, European Geophysical Union (EGU)

*Member*, Dutch Global Change Committee of the Royal Academy of Arts and Sciences (KNAW)

*Member*, Science Evaluation Panel, European Research Council (ERC)

*Member of* numerous Advisory and Evaluating Panels of the EU 6<sup>th</sup> and 7<sup>th</sup> Framework Programmes

**SCIENTIFIC AWARDS** (selection):

Honorary Doctorate, Ukrainian Academy of Sciences

Co-Recipient *2007 Nobel Peace Prize* as a Lead Author of the IPCC (group award to the IPCC authors)

Co-Recipient *The Zayed International Prize for the Environment* (group award to the authors of the Millennium Ecosystem Assessment (2006)

Recipient, *Dahlem Foundation International Prize*, Berlin, Germany (1998)

Recipient, *NASA Goddard Space Flight Centre Prize*, Maryland, USA (1997)

Recipient, *Excellent Research Scientist Award*, Netherlands National Agriculture Research Department (permanent qualification granted starting from 1998)

Numerous **invited & keynote presentations** and at international scientific forums, including European Geophysical Union, American Geophysical Union, The Royal Society London; US Academy of Sciences, Japan Frontier Science Programme, Chinese Academy of Sciences, Academy of Sciences of Brazil, American Meteorological Society (AMS), World Meteorological Organisations (WMO), UNESCO, International Council of Science Unions (ICSU), UNFCCC, Intergovernmental Panel on Climate Change (IPCC), United Nations Development Programme (UNDP), European Space Agency (ESA), FAO, NASA, EU, IGBP, WCRP. Includes key note invited lectures at the World Summit on Sustainable Development (WSSD) in August 2002 in Johannesburg, at the 3<sup>rd</sup> World Water Forum in Kyoto 2003, at CSD in New York 2004, at International Water Association (IWA) meetings – in 2002 (Melbourne), 2007 (Amsterdam) and 2009 (Vienna), for Chinese Academy of Sciences in 2008, 2009, 2009, and for Japanese Science Council in 2010.

**Science Assessment and Science to Policy Advisory Positions (selection)**

*Review Editor* IPCC AR5 (2010-2014)

*Lead Author*, Intergovernmental Panel on Climate Change (IPCC 4<sup>th</sup> AR) 2004–2007

*Lead Author*, Millennium Ecosystem Assessment

*Review Editor*, Millennium Ecosystem Assessment

*Chief Scientist*, Asian Development Bank project in Bangladesh (2008–2010)

*Member*, Delta Committee (A special high level state committee appointed by the Dutch Cabinet to advise about future and climate-proof re-structuring of the Dutch infrastructure (2007–2009))

*Member*, High Level International Mekong Delta Committee (2010–2012)

*Science Advisor*, EU delegation to UNFCCC/CoP, Bali, Indonesia Dec. 2007

*Science Advisor* and delegation member (national, EU), UNFCCC COP meetings in Buenos Aires and Copenhagen

*Science Advisor* and delegation member (national and EU), at WSSD 2002, and World Water Forums in Kyoto (2003) and in Mexico (2006)

*Member*, Scientific and Technical Advisory Panel (STAP) of the Global Environmental Facility (GEF) of the United Nations Environment Programme (2001)

*Member and Chair* of a numerous Advisory Panels to the Dutch Government (central, provinces, water boards) on *climate, water and environment issues* and related policies

*Member*, Advisory Group on Climate to the Dutch Parliament

Member of several Reflection and Advisory Groups to NGO sector (IUCN, Red Cross, WWF)

Member of several Reflection and Advisory groups to private sector (Munich Re, Swiss Re, Peugeot Citroen, Shell, Rabobank, engineering and building companies)

**Frequent interviews in press and in the media (national and international);** Some examples:

For selection of media coverage as Director General of IIASA:

<http://www.iiasa.ac.at/web/home/about/leadership/director/Select-press-coverage-relating-to-IIASA-Director-Pav.en.html>

Interview for Nature Climate Change January 2013 (<http://www.iiasa.ac.at/web/home/research/NCCPKWater.pdf>)

*Nature Climate Reports* 2010 (<http://www.nature.com/climate/2010/1004/full/climate.2010.28.html>)

Interview for The Age, Australia, 2009

(<http://www.theage.com.au/environment/out-of-the-gloom-holland-sees-change-for-better-20091205-kc4f.html>)

Interview for The Guardian, 11 September 2008

(<http://www.guardian.co.uk/environment/2008/sep/11/water.climatechange>)

CNBC special broadcasting on Global Players around 2007 Stockholm Water Week and the IPCC

*Die Zeit* (Germany), major coverage/interview May 2007 <http://www.zeit.de/2007/21/Bangladesch>

Interview for *NASA Observatory*, USA, 2003 <http://earthobservatory.nasa.gov/Features/islscp/>