

# Future of Ecosystem Services

Research Center

(FuturES)

Annual Report 2015

### **FuturES: Future of Ecosystem Services**

The concept of ecosystem services—the benefits derived from human interactions with, and appropriation of, the physical structures and processes occurring in (natural and human dominated) ecosystems—has emerged as one of the most important new paradigms of the environmental and sustainability sciences in the last fifteen years. The notion of ecosystem services has the potential to act as a boundary object, capable of bringing together various scientific domains of knowledge that study the interactions and interdependencies between human society and nature. Synthesising such knowledge may provide vital and encompassing understandings, and inform sustainable management, of social-ecological systems.

FuturES, founded in 2012, brings together the diverse expertise of researchers at Leuphana University of Lüneburg across a wide range of disciplines such as communication science, ecology, economics, ethics, political science and management. FuturES seeks to foster genuinely interdisciplinary collaboration between a broad spectrum of the natural and social sciences, and the active involvement of stakeholders and policy makers in shaping research goals and methods (transdisciplinary approach) within the broader conceptual framework and societal goal of sustainability.

FuturES expands on the existing research in the field of ecosystem services by relating the (largely) descriptive concept of ecosystem services to the explicitly normative concept of sustainability. A particular emphasis is on trade-offs and conflicts between multiple services and the uncertainties inherent in the generation and appropriation of ecosystem services. In doing so FuturES seeks to develop new management and governance strategies for the management of ecosystem services with explicit regard to the goal of sustainability.

FuturES is the first research center in Germany that takes a truly encompassing and integrated approach to ecosystem services. This approach places it among a small number of institutions worldwide, seeking not simply to use the concept of ecosystem services within established research approaches, but to actively strengthen the concept as a new tool in the search for sustainability solutions.

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### **Highlights**

The most important events and developments of the past year for the FuturES research center included the following:

- In 2015 FuturES was joined by three new team members. Vicky Temperton was appointed the professorship for Ecosystem Functioning and Ecosystem Services at Leuphana University in April 2015 and shortly after took on the position as director of FuturES in place of Henrik von Wehrden. Dave Abson left FuturES to join the project "Leverage Points for Sustainability Transformation: Institutions, People, Knowledge" as a PI and his position as coordinator of FuturES was filled by Heike Zimmermann. The third new member of FuturES in 2015 is Berta Martín-López, who successfully applied for the new professorship for Sustainability Science at Leuphana in October 2015.
- In 2015 FuturES had over 50 members including 8 professors, more than 15 postdoctoral researchers and 29 PhD students, from a diverse range of scientific fields, providing a breadth of knowledge and understanding regarding many aspects of ecosystem services.
- In 2015, FuturES members produced 61 international peer-reviewed journal articles, including publications in Trends in Ecology & Evolution, Current Opinion in Environmental Sustainability, Frontiers in Ecology and the Environment, PloS one, Land Use Policy, Journal of Ecology, Diversity and Distributions, Sustainability Science and Ecosystem Services.
- During 2015, FuturES researchers worked on ecosystem services related research projects with a combined value of more than 6 million euros.
- Two members of FuturES were among five PIs from Leuphana university who successfully applied for a 1 million euro grant application on "Bridging the great divide in sustainability science: linking high-performance modelling and transition experiments to foster transformational change towards sustainability" due to start in 2016.
- In 2015, a group of FuturES members, including eight full professors and three early career researchers, made substantial progress in moving forward the proposal for a Research Training Group (DFG). A number of topic explorations during several meetings let to a common topic that is both innovative and engaging for all and would be ideal for a Research Training Group.

In this Annual Report, the various achievements of the past year are described in more detail.



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# **Research Projects**

Basic funding for FuturES comes from Leuphana University of Lüneburg. In addition, FuturES research center members are undertaking externally funded research projects with a total value to Leuphana University of Lüneburg of approximately 5 million euros.

### **Externally Funded Projects Completed**

Project title	Principal Investigators (at Leuphana)	Period	Source of funding	Funding for Leuphana
Fostering sustainable development in	Fischer, J.	2010-	Sofja-Kovalevskaja	€1,500,000
Eastern Europe: A case study of ancient		2015	Award / Alexander	
agricultural landscapes in Central			von Humboldt	
Romania			Foundation	
Plant growth and demography; SP2 in the	Härdtle, W.	2011-	German Research	€150,000
BEF-China research unit		2014	Foundation (DFG)	
Population genetics meets landscape	Aβmann, T.	2011 -	German Research	€206,400
ecology in the biodiversity exploratories:		2014	Foundation (DFG)	
a case study on genetic differentiation of				
ground beetle populations (PopGeneLand)				
Functional effects of herbivores, predators	Aβmann, T.	2011 -	German Research	€46,800
and saproxylics (Subproject 8 of DFG		2014	Foundation (DFG)	
research group BEF China)				
Ecological importance and functioning of	Aβmann, T	2012-	Federal Agency for	€350,000
semi-open corridors	Härdtle, W.	2015	Nature	
			Conservation	
Academic partnership for the conservation	Michelsen, G.,	2011 -	German Academic	€113,350
of biodiversity	Rieckmann, M.,	2014	Exchange Service	
	Adomßent, M		(DAAD)	
			Total	ca €2,366,550



# **On-going Externally Funded Projects**

Project title	Principal Investigators (at Leuphana)	Period	Source of funding	Funding for Leuphana
Identifying Social-Ecological System	Fischer, J.	2014-	ERC Consolidator	€1,800,000
Properties Benefiting Biodiversity and Food		2019	Grant	
Security				
Plant growth and demography; SP2 in the	Härdtle, W.	2014 -	German Research	€172,750
BEF-China research unit		2016	Foundation (DFG)	
Multi-trophic plant-insect networks in a tree	Aßmann, T.	2014 -	German Research	€21,780.00
diversity experiment in China, SP9 in the		2016	Foundation (DFG)	
BEF-China research unit				
Mechanisms of soil erosion, soil properties	Aßmann, T.	2014-	German Research	€24,359.00
and Ecoscape analysis as a function of		2016	Foundation (DFG)	
species richness and species composition in				
subtropical forests; SP6 in the BEF-China				
research unit				
Exploring priority effects over time for	Temperton, V.	2013-	Ciencia sem	€99,000
grassland restoration		2016	Fronteira (CNPq)	
Land-use responses of dung beetle	Aßmann, T.	2014-	German Research	€23,600
communities and their ecosystem services		2017	Foundation (DFG)	
Protection of the worldwide endangered	Härdtle, W.	2013-	BMBF	€432,000
species Gagea spathacea (WaldGloWan)		2019		
Critical Loads for heathland ecosystems	Härdtle, W.	2012-	UBA	€170,000
		2016		
Multi-agri: Multifunctional agricultural	Newig. J.,	2013-	RURAGRI ERA-NET	€300,000
land-use	Fischer, J.	2016	(EU FP7)	
Responses of plant performance and	von Wehrden, H.	2014-	DFG	€186,120
functional diversity along a climate and		2017		
land-use gradient in Mongolia				
Increasing agricultural nutrient-use	Temperton, V.,	2015-	BMBF	€147,198
efficiency by optimizing plant-soil-	von Wehrden, H.	2018		
microorganism interactions (INPLAMINT)				
Leverage Points for Sustainability	Lang, D.,	2015-	Volkswagen	€2,700,000
Transformation	Newig, J.,	2019	Stiftung	
	Fischer J.,			
	von Wehrden, H.			
			Total	€6,076,807

#### PhD Research

In 2015 there were 29 PhD students associated with FuturES, engaging in very diverse research related to ecosystem services. The research undertaken ranges from ecosystem function through governance, economics, justice, food security and biodiverstiy conservation and leverage points in social-ecological systems.

#### **PhD Theses Completed**

Dorresteijn, I., The Future of birds and large carnivores in Romania, Transylvania

Gralla, F., Sustainable perspective on nuclear energy and possible challenges

Groeneveld, J. How oil plant cultivation should be designed to safeguard ecosystem services and biodiversity

Loos, J., The future of plants and butterflies in Transylvania

Li, Y., Tree growth and aboveground competition in subtropical forest ecosystem in southeast China

Milcu, A., Cultural ecosystem services and historical changes

Mikulcak, F., Fostering sustainable development in Eastern Europe

Schäckermann, S., Biodiversity and its role in the ecosystem services and dis-services concept in agricultural landscapes in Israel

#### PhD Theses On-going

Ahlborn, J. Biodiversity and community traits across a land use gradient in Mongolia

Bähring, A., Nitrogen (N) inputs in ecosystems endangered by eutrophication

Boutaud, E., Semi-open corridors: ground beetles

Derwort, P., Institutional change in energy systems

Dorninger, C., Biophysical human-nature connectedness

van Duijnen, R., Root properties in relation to nutrient supply

Dziedek, C., Interactive effects of nitrogen deposition and drought on forest ecosystems

Eggers, J., Fragmentation effect and traffic intensity on populations flightless beetle species

Ehlers, D., Semi-open corridors: spiders and stenotopoic vertebrates

Hess, C., Quantification of forests dynamics based on TLS (Terrestrial Laser Scanning)

Hülsmann, M., Faeces decomposition, biodiversity and ecosystem resilience

Jahn, S., Role of social sciences in inter- and transdisciplinary sustainability research (MONA)

John, B., Learning for transitions in urban areas

Laws, N., Tangible Sustainability Policy: Possibilities and constraints of the establishment of biodiversity as a crosscutting issue on the German federal level

Lutz, L., Energy transition in Germany and the role of regions for the implementation of renewable energy

Manlosa, A., Livelihood strategies and food security of different social groups in Ethiopia

Marcus, T., The effects of land use type and intensity on genetic diversity of ground beetles

Mausolf, K... Ecological continuity

Oyundari, C., Sustainable use of oases in the Gobi desert

Rau, A-L, Temporal aspects of Ecosystem services

Rodrigues, P., Human-wildlife interactions and sources of conflict

Röllig, R., European Wood-pastures

Senbeto, T., Governance of food security and biodiversity in South Western Ethiopia

Shumi, G., Effects of land use changes (food production) on biodiversity and ecosystem services

Travers, E., Importance of semi-open corridors for habitat cross-linking

Weidlich, E., Exploring priority effects over time for grassland restoration

Zumstein, P., Decomposers and predators in the CSPs of BEF China

### **Publications**

Research results of FuturES have been published in a wide range of books and academic journals -64 publications altogether, including 61 articles in international peer-reviewed journals. Many interdisciplinary publications have been written with co-authors from other academic disciplines and institutions.

#### **International Peer-reviewed Journal Publications**

- 1. Austin K., Boutaud E., Buse J., Chikatunov V., Drees C., Felix R.F.F.L., Friedman A.L.L., Khoury F., Renan I., Schmidt C., Wrase D.W., Aßmann T., & Marcus T. (2015) The ground beetle supertribe Zuphiitae in the southern Levant. Spixiana, 38, 237–262.
- 2. Azhar B., Saadun N., Puan C., Kamarudin N., Aziz N., Nurhidayu S., & Fischer J. (2015) Promoting landscape heterogeneity to improve the biodiversity benefits of certified palm oil production: evidence from Peninsular Malaysia. Global Ecology and Conservation, 3, 553–561.
- 3. Bennett E., Cramer W., Begossi A., Cundill G., Díaz S., Egoh B., Geijzendorffer I., Krug C., Lavorel S., Lazos E., Lebel L., Martín-López B., Meyfroidt P., Mooney H., Nel J., Pacual U., Payet K., Pérez Harguindeguy N., Peterson G., Prieur-Richard A.-H., Reyers B., Roebeling P., Seppelt R., Solan M., Tschakert P., Tscharntke T., Turner II B., & Verburg P. (2015) Linking biodiversity, ecosystem services, and human well-being: three challenges for designing research for sustainability. Current Opinion in Environmental Sustainability, 14, 76–85.
- 4. Calvo-Fernández J., Marcos E., Calvo L., & Härdtle W. (2015) Allocation patterns of airborne nitrogen in mountainous heathlands—A 15 N tracer study in the Cantabrian Mountains (NW Spain). Ecological Engineering, 84, 128—135.
- 5. Castro A.J., Martín-López B., López E., Plieninger T., Alcaraz-Segura D., Vaughn C.C., & Cabello J. (2015) Do protected areas networks ensure the supply of ecosystem services? Spatial patterns of two nature reserve systems in semi-arid Spain. Applied Geography, 60, 1–9.
- 6. Corney H., Ives C.D., & Bekessy S. (2015) Amenity and ecological management: A framework for policy and practice. Ecological Management & Restoration, 16, 199–205.
- 7. Díaz S., Demissew S., & Carabias J. (2015) The IPBES Conceptual Framework—connecting nature and people. Current Opinion in Environmental Sustainability, 14, 1–16.
- 8. Dorresteijn I., Schultner J., Nimmo D.G., Fischer J., Hanspach J., Kuemmerle T., Kehoe L., & Ritchie E.G. (2015a) Incorporating anthropogenic effects into trophic ecology: predator—prey interactions in a human-dominated landscape. Proceedings of the Royal Society B, 282, 20151602.
- 9. Dorresteijn I., Teixeira L., von Wehrden H., Loos J., Hanspach J., Stein J.A.R., & Fischer J. (2015b) Impact of land cover homogenization on the Corncrake (Crex crex) in traditional farmland. Landscape Ecology, 30, 1483–1495.
- 10. Drazkiewicz A., Challies E., & Newig J. (2015) Public participation and local environmental planning: Testing

- factors influencing decision quality and implementation in four case studies from Germany. Land Use Policy, 46, 211–222.
- 11. Felipe-Lucia M.R., Martín-López B., Lavorel S., Berraquero-Díaz L., Escalera-Reyes J., & Comín F.A. (2015) Ecosystem Services Flows: Why Stakeholders' Power Relationships Matter. PloS one, 10, e0132232.
- 12. Fichtner A., Forrester D., Härdtle W., Sturm K., & Oheimb G. (2015) Facilitative-Competitive Interactions in an Old-Growth Forest: The Importance of Large-Diameter Trees as Benefactors and Stimulators for Forest Community. PloS one, 10, e0120335, 24.03.2015.
- 13. Fischer J., Gardner T., & Bennett E. (2015) Advancing sustainability through mainstreaming a social—ecological systems perspective. Current Opinion in Environmental Sustainability, 14, 144–149.
- 14. García-Llorente M., Iniesta-Arandia I., Willaarts B., Harrison P., Berry P., del Mar Bayo M., Castro A., Montes C., & Martín-López B. (2015) Biophysical and sociocultural factors underlying spatial trade-offs of ecosystem services in semiarid watersheds. Ecology and Society, 20, 39.
- 15. García-Nieto A.P., Quintas-Soriano C., García-Llorente M., Palomo I., Montes C., & Martín-López B. (2015) Collaborative mapping of ecosystem services: The role of stakeholders' profiles. Ecosystem Services, 13, 141–152.
- 16. Geijzendorffer I.R., Martín-López B., & Roche P.K. (2015) Improving the identification of mismatches in ecosystem services assessments. Ecological Indicators, 52, 320–331.
- 17. Glamann J., Hanspach J., Abson D., & Fischer J. (2015) The intersection of food security and biodiversity conservation: a review. Regional Environmental Change, 1–11.
- 18. Goebes P., Bruelheide H., Härdtle W., Kröber W., Kuehn P., Li Y., Seitz S., von Oheimb G., & Scholten T. (2015) Species-specific effects on throughfall kinetic energy in subtropical forest plantations are related to leaf traits and tree architecture. PloS one, 10, e0128084.
- 19. Gralla F., Abson D., Møller A.P., Lang D.J., Vilsmaier U., Sovacool B.K., & von Wehrden H. (2015) Nuclear accidents call for transdisciplinary nuclear energy research. Sustainability Science, 10, 179–183.
- 20. Guiz J., Hillebrand H., Borer E., Abbas M., Ebeling A., Weigelt A., Oelmann Y., Fornara D., Wilcke W., Temperton V.M., & Weisser W.W. (2015) Long-term effects of plant diversity and composition on plant stoichiometry. Oikos, .
- 21. Hirsch H., Wypior C., Wehrden H. von, Wesche K., Renison D., & Hensen I. (2015) Comparison of the germination performance of native and invasive Siberian elm populations. BioRisk, .
- 22. Hülsmann M., von Wehrden H., Klein A.-M., & Leonhardt S.D. (2015) Plant diversity and composition compensate for negative effects of urbanization on foraging bumble bees. Apidologie, 46, 760–770.
- 23. Iniesta-Arandia I., García Del Amo D., García-Nieto A.P., Piñeiro C., Montes C., & Martín-López B. (2015) Factors influencing local ecological knowledge maintenance in Mediterranean watersheds: Insights for environmental policies. Ambio, 44, 285–96.
- 24. Ives C.D. & Bekessy S.A. (2015) The ethics of offsetting nature. Frontiers in Ecology and the Environment,

- 13, 568-573.
- 25. Ives C.D., Biggs D., Hardy M.J., Lechner A.M., Wolnicki M., & Raymond C.M. (2015) Using social data in strategic environmental assessment to conserve biodiversity. Land Use Policy, 47, 332–341.
- 26. Jew E., Loos J., Dougill A., Andrew J., Sallu S.M., & Benton T.G. (2015) Butterfly communities in miombo woodland: Biodiversity declines with increasing woodland utilisation. Biological Conservation, 192, 436–444.
- 27. Juerges N. & Newig J. (2015) How interest groups adapt to the changing forest governance landscape in the EU: A case study from Germany. Forest Policy and Economics, 50, 228–235.
- 28. Jürges N. & Newig J. (2015) What role for frames in scalar conflicts? Land Use Policy, 49, 426–434.
- 29. Loos J., Horcea-Milcu A., Kirkland P., Hartel T., Osváth-Ferencz M., & Fischer J. (2015a) Challenges for biodiversity monitoring using citizen science in transitioning social—ecological systems. Journal for Nature Conservation, 26, 45–48.
- 30. Loos J., Kuussaari M., Ekroos J., Hanspach J., Fust P., Jackson L., & Fischer J. (2015b) Changes in butterfly movements along a gradient of land use in farmlands of Transylvania (Romania). Landscape Ecology, 30, 625–635.
- 31. Loos J., Turtureanu P., von Wehrden H., Hanspach J., Dorresteijn I., Frink J.P., & Fischer J. (2015c) Plant diversity in a changing agricultural landscape mosaic in Southern Transylvania (Romania). Agriculture, Ecosystems & Environment, 199, 350–357.
- 32. Luederitz C., Brink E., Gralla F., Rau A.-L., Abson D., Lang D.J., & von Wehrden H. (2015) A review of urban ecosystem services: six key challenges for future research. Ecosystem Services, 14, 98–112.
- 33. Luederitz C., Meyer M., Abson D., Rau A.L., & von Wehrden H. (2016) Systematic student-driven literature reviews in sustainability science—an effective way to merge research and teaching. Journal of Cleaner Production, 119, 229–235.
- 34. Martín-López B. & Montes C. (2014) Restoring the human capacity for conserving biodiversity: a social—ecological approach. Sustainability Science, 10, 699–706.
- 35. Meyer-Grünefeldt M., Friedrich U., Klotz M., Oheimb G., & Härdtle W. (2015) Nitrogen deposition and drought events have non-additive effects on plant growth Evidence from greenhouse experiments. Plant Biosystems, 149, 424–432.
- 36. Meyer-Grünefeldt M., Calvo L., Marcos E., Von Oheimb G., & Härdtle W. (2015) Impacts of drought and nitrogen addition on Calluna heathlands differ with plant life-history stage. Journal of Ecology, 103, 1141—1152.
- 37. Mikulcak, Friederike Haider J.L., Abson D., Newig J., & Fischer J. (2015) Applying a capitals approach to understand rural development traps: A case study from post-socialist Romania. Land Use Policy, 43, 248–258.
- 38. Milne E., Banwart, Steven A Noellemeyer E., Abson D., Ballabio C., Bampa, Francesca Bationo A., Batjes N.H., Bernoux, Martial Bhattacharyya, Tapas Black, Helaina Buschiazzo D.E., Cai Z., Cerri, Carlos Eduardo Cheng K.,

Compagnone, Claude Conant R., Coutinho H.L.C., de Brogniez D., Balieiro F. de C., Duffy C., Feller C., Fidalgo E.C.C., da Silva C.F., Funk R., Gaudig G., Gicheru P.T., Goldhaber M., Gottschalk P., Goulet F., Goverse T., Grathwohl P., Joosten H., Kamoni P.T., Kihara J., Krawczynski R., La Scala N., Lemanceau P., Li L., Li Z., Lugato E., Maron P.A., Martius C., Melillo J., Montanarella L., Nikolaidis N., Nziguheba G., Pan G., Pascual U., Paustian K., Piñeiro G., Powlson D., Quiroga A., Richter D., Sigwalt A., Six J., Smith J., Smith P., Stocking M., Tanneberger F., Termansen M., van Noordwijk M., van Wesemael B., Vargas R., Victoria R.L., Waswa B., Werner D., Wichmann S., Wichtmann W., Zhang X., Zhao Y., Zheng J., & Zheng J. (2015) Soil carbon, multiple benefits. Environmental Development, 13, 33–38.

- 39. Nabel M., Temperton V., Poorter H., Lücke A., & Jablonowski N. (2016) Energizing marginal soils—The establishment of the energy crop Sida hermaphrodita as dependent on digestate fertilization, NPK, and legume intercropping. Biomass and Bioenergy, 87, 9–16.
- 40. Oliver T.H., Heard M.S., Isaac N.J.B., Roy D.B., Procter D., Eigenbrod F., Freckleton R., Hector A., Orme C.D.L., Petchey O.L., Proença V., Raffaelli D., Suttle K.B., Mace G.M., Martín-López B., Woodcock B.A., & Bullock J.M. (2015) Biodiversity and Resilience of Ecosystem Functions. Trends in Ecology & Evolution, 30, 673–684.
- 41. Oteros-Rozas E., Martín-López B., Daw T.M., Bohensky E.L., Butler J.R.A., Hill R., Martin-Ortega J., Quinlan A., Ravera F., Ruiz-Mallén I., Thyresson M., Mistry J., Palomo I., Peterson G.D., Plieninger T., Waylen K.A., Beach D.M., Bohnet I.C., Hamann M., Hanspach J., Hubacek K., Lavorel S., & Vilardy S.P. (2015) Participatory scenario planning in place-based social-ecological research: insights and experiences from 23 case studies. Ecology and Society, 20, art32.
- 42. Partelow S., Wehrden H. von, & Horn O. (2015) Pollution exposure on marine protected areas: a global assessment. Marine Pollution Bulletin, 100, 352–358.
- 43. Plieninger T., Hartel T., Martín-López B., Beaufoy G., Bergmeier E., Kirby K., Montero M.J., Moreno G., Oteros-Rozas E., & Van Uytvanck J. (2015) Wood-pastures of Europe: Geographic coverage, social—ecological values, conservation management, and policy implications. Biological Conservation, 190, 70–79.
- 44. Plückers C., Temperton V., Erler A., Putz A., Schaar H., & Rascher U. (2015) Moving Towards Measuring Multifunctionality in Ecosystems: FieldScreen—A Mobile Positioning System for Non-Invasive Measurement of Plant Traits in Field. Nova Acta Leopoldina, 114, 221—238.
- 45. Raymond C.M., Bieling C., Fagerholm N., Martin-Lopez B., & Plieninger T. (2015) The farmer as a landscape steward: Comparing local understandings of landscape stewardship, landscape values, and land management actions. Ambio, 45, 173–84.
- 46. Roellig M., Sutcliffe L.M.E., Sammul M., von Wehrden H., Newig J., & Fischer J. (2016) Reviving woodpastures for biodiversity and people: A case study from western Estonia. Ambio, 45, 185–95.
- 47. Saavedra-Díaz L.M., Rosenberg A.A., & Martín-López B. (2015) Social perceptions of Colombian small-scale marine fisheries conflicts: Insights for management. Marine Policy, 56, 61–70.
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# **Services to the Scientific Community**

#### **Editorial Services**

FuturES members edited, or were associate or subject editors for, the following international peer-reviewed journals:

- Conservation Letters (Fischer, J.)
- Diversity and Distributions (Fischer, J.)
- Environmental Policy and Gonvernance (Newig, J.)
- Ecology and Society (Fischer, J. & Martín-López, B.)
- Frontiers in Plant Science (Temperton, V.)
- Restoration Ecology (Temperton, V.)
- Tuexenia (Härdtle, W.)
- ZooKeys (Aβmann, T.)

#### **Advisory Services**

FuturES members sat on the following scientific steering committees, advisory boards, etc:

- Härdtle, W., Beirat des Vereins Naturschutzpark Lüneburg Heide (VNP)
- Martín-López, B., ipbes review editor (3a chapter 5)
- Temperton, B., on the advisory board of the South Korean National Institute of Ecology
- Zimmermann, H., Steuerungsgruppe "ÖSL in Lehre und Umweltbildung" Innovationsnetzwerk Ökosystemleistungen Deutschland

### Looking ahead

Our application for a Graduate School at the DFG (Research Training Group) has gained momentum. A group of FuturES members, including eight full professors and two early career researchers, are engaged to move forward the proposal on a common topic, approaching it from various disciplinary perspectives. The focus of a DFG Research Training Group is the supervision and training of PhD students on a novel topic within an interdisciplinary setting. To that end, Ecosystem Services present the perfect framework for an interdisciplinary setting and our group of applicants cover a broad range of disciplines. A kick-off workshop is planned with potential Mercator Fellows in summer 2016 to further gather and frame ideas on our Research Training Group. The Mercator Fellows will strengthen the international component of the group as well as contribute to gender balance.

In line with our Research Training group, FuturES is a member of steering committee "Teaching and Education" in the Ecosystem Service Partnership network Germany (ESP-DE) since November 2015. The aim of this network is to connect scientist working on the Ecosystem Service concept and to move the concept further into society. The steering committee "Teaching and Education" aims to be a knowledge hub for students and scholars on existing study programmes on Ecosystem Services, but will also initiate workshops and summer schools on Ecosystem Services as well as distribute training material.

The main strategic goal for 2016 will be to submit our proposal for the Research Training Group at the DFG. Therefore our main aim for the future of FuturES will be to move from a Research Centre into a Research Training Group.

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