

Soyeon Bae

Name	Bae, Soyeon
Academic title	Ph.D.
Institution	Thünen Institute of Farm Economics, Bundesallee 63, 38116 Braunschweig, Germany
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Webpage	https://www.thuenen.de/en/institutes/farm-economics/staff/scientific-staff/bae-soyeon-dr https://www.researchgate.net/profile/Soyeon-Bae ORCID: 0000-0003-1961-1226

RESEARCH	- Landscape heterogeneity and biodiversity across spatial and temporal scales
FOCUS	- Large-scale assessment of ecological structure and function using remote sensing

EDUCATION	PhD in Environmental Planning, Seoul National University , Korea	3/2010 – 8/2015
	Exchange student in Biogeographical Modelling, University of Bayreuth , Germany	10/2011 – 3/2012
	Master of Landscape Architecture, Seoul National University , Korea	9/2005 – 12/2007
	Bachelor of Architecture, Seoul National University , Korea	3/2000 – 8/2004

SCIENTIFIC CAREER	Researcher, Thünen Institute of Farm Economics , Germany	1/2026 – present
	Post Doctor, Centre of Biodiversity and Sustainable Land Use, University of Göttingen , Germany	11/2022 – 12/2025
	Post Doctor with Prof. Wolfgang Weisser, Terrestrial Ecology Research Group, Technical University of Munich , Germany	01/2022 – 03/2023
	Post Doctor with Prof. Jörg Müller, Department of Animal Ecology and Tropical Biology (Zoology III), University of Würzburg , Germany	10/2017 – 12/2021
	Post Doctor with Dr. Shaun Levick, Department of Biogeochemical Processes, Max Planck Institute for Biogeochemistry , Jena, Germany	4/2017 – 9/2017
	Research fellow, Division of Ecological Survey Research, National Institute of Ecology , Korea	8/2015 – 3/2017

Visiting scientist in Irstea (The Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture), Grenoble, France	11/2013 – 4/2014
Research Assistant, Department of Environmental Planning, Seoul National University , Korea	9/2012 – 8/2013, 9/2010 – 8/2011
Researcher, SNU Environmental Planning Institute , Seoul National University, Korea	9/2011 – 5/2015
Visiting scientist in Bavarian Forest National Park , Germany	3/2012 – 4/2012
Researcher in the Department of Urban Ecology, Korea Institute of Construction Technology , Korea	1/2008 – 1/2010
Researcher in the Department of Landscape Ecology, LEED (Landscape Ecology and Environmental Design) , Korea	9/2004 – 6/2005

TEACHING	Supervisor, <i>EAGLE (applied EArth Observation and Geoanalysis of the Living Environment) graduate program</i> , University of Würzburg , Germany	2/2021 – 5/2022,
EXPERIENCE		4/2020 – 7/2020,
		10/2018 – 2/2019,
		7/2017
	Co-lecturer, <i>EAGLE graduate program</i> , University of Würzburg , Germany	10/2017 – 2/2018
	Master's course: <i>Applications of Earth Observation</i>	
	Lecturer, Summer Workshop on Introduction to R and Statistics, Department of Environmental Planning, Seoul National University , Seoul, Korea	7/2012
	Graduate Teaching Assistant, Department of Environmental Planning, Seoul National University , Seoul, Korea	9/2012 – 8/2013,
		9/2010 – 2/2011

PUBLICATIONS

Peer-Reviewed Journals

- 16 ISI Journal Papers, 618 Citations (ISI), h-index (ISI) = 10 (assessed 08.09.2025)
- [20] Hochrein, S., Liebhold, A. M., **Bae, S.**, et al. (2025). Bat response to experimental insecticide application against a defoliating moth in mixed oak forests. *Journal of Applied Ecology*, 62(9), 2177–2188. <https://doi.org/10.1111/1365-2664.70104>
- [19] Mitesser, O., Hochrein, S., Burivalova, Z., ... **Bae, S.**, et al. (2025). Unexpected soundscape response to insecticide application in oak forests. *Conservation Biology*, 39(3), e14422. <https://doi.org/10.1111/cobi.14422>
- [18] Staab, M., Gossner, M. M., Simons, N. K., ... **Bae, S.**, et al. (2023). Insect decline in forests depends on species' traits and may be mitigated by management. *Communications Biology*, 6(1). <https://doi.org/10.1038/s42003-023-04690-9>

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- [17] Leroy, B. M. L., Rabl, D., Püls, M., ... **Bae, S.**, et al. (2023). Traits-mediated responses of caterpillar communities to spongy moth outbreaks and subsequent tebufenozide treatments. *Ecological Applications*. <https://doi.org/10.1002/eap.2890>
- [16] Heidrich, L., Brandl, R., Ammer, C., ... **Bae, S.**, et al (2023) Effects of heterogeneity on the ecological diversity and redundancy of forest fauna. *Basic and Applied Ecology* 73:72–79. <https://doi.org/10.1016/j.baae.2023.10.005>
- [15] Hilmers, T., Leroy, B.M.L., **Bae, S.**, et al (2023) Growth response of oaks to insect defoliation: Immediate and intermediate perspectives. *Forest Ecology and Management* 549:121465. <https://doi.org/10.1016/j.foreco.2023.121465>
- [14] Peereman, J., **Bae, S.**, Lin, T. (2022) A comparison of radar and optical remote sensing to detect cyclone-induced canopy disturbance in two subtropical forest landscapes. *Environmental Research Communications* 4:101002. <https://doi.org/10.1088/2515-7620/ac9664>
- [13] **Bae, S.***, Müller, J., Förster, B.... Mitesser, O. (2022). Tracking the temporal dynamics of insect defoliation by high-resolution radar satellite data. *Methods in Ecology and Evolution*, 13(1), 121–132. <https://doi.org/10.1111/2041-210X.13726>
- [12] Seibold, S., Rammer, W., Hothorn, T., Seidl, R., ... **Bae, S.**, ... Müller, J. (2021) The contribution of insects to global forest deadwood decomposition. *Nature* 597(7874), 77-81.
- [11] **Bae, S.***, Heidrich, L., Levick, S. R., Gossner, M., Seibold, S., ... Müller, J. (2021) Dispersal ability, trophic position and body size mediate species turnover processes: Insights from a multi-taxon and multi-scale approach. *Diversity and Distributions* 27(3), 439-453. (Editor's choice)
- [10] Heidrich, L., **Bae, S.**, Levick, S. R., Seibold, S., Weisser, W., ... Müller, J. (2020) Heterogeneity–diversity relationships differ between and within trophic levels in temperate forests. *Nature Ecology & Evolution* 4(9), 1204-1212.
- [9] Kim,D., I. Park, **S. Bae**, J. J. Fong, Y. Zhang, S. Li, H. Ota, J. Kim, D. Park (2020) Prediction of present and future distribution of the Schlegel's Japanese gecko (*Gekko japonicus*) using MaxEnt modeling. *Journal of Ecology and Environment* 44(5).
- [8] **Bae, S.***, S. R. Levick, L. Heidrich, P. Magdon, B. F. Leutner, ... J. Müller (2019) Radar vision in the mapping of forest biodiversity from space. *Nature Communications* 10, 4757-4766.
- [7] **Bae, S.***, J. Müller, D. Lee, K. Vierling, J. Vogeler, L. Vierling, A. Hudak, H. Latifi, S. Thorn (2018) Taxonomic, functional, and phylogenetic diversity of bird assemblages are oppositely associated to productivity and heterogeneity in temperate forests. *Remote Sensing of Environment* 215, 145-156.
- [6] Kim, H., C. Park, D. Lee, J. Park, **Bae, S.*** (2018) Habitats Suitability Analysis for Establishing Conservation Area of Siheung-si. *Journal of Korea Planning Association* 53(3), 161-175.
- [5] Lee, H., J. Ha, J. Cha, J. Lee, H. Yoon, C. Chung, S. Han, H. Oh, and **Bae, S.*** (2017) The Habitat Classification of mammals in Korea based on the National Ecosystem Survey. *Journal of Environmental Impact Assessment* 26(2), 160-170.
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- [4] Cho, Y., D. Lee, and Bae, S.* (2017) Effects of vegetation structure and human impact on understory honey plant richness: implications for pollinator visitation. *Journal of Ecology and Environment* 41(2).
- [3] Kim, W., Bae, S., S. Oh, H. Yoon, J. Lee, W. Paek, and H. Sung (2016) Distribution of the Kentish Plover Based on the 3rd National Ecosystem Survey and Its Adequacy as a Bioindicator. *Korean Journal of Environment and Ecology* 30(2), 155-164.
- [2] Bae, S.*, B. Reineking, M. Ewald, and J. Mueller (2014) Comparison of airborne LiDAR, aerial photography, and field surveys to model the habitat suitability of a cryptic forest species—the hazel grouse. *International Journal of Remote Sensing* 35(17), 6469-6489.
- [1] Müller, J., Bae, S., J. Röder, A. Chao, and R. K. Didham (2014) Airborne LiDAR reveals context dependence in the effects of canopy architecture on arthropod diversity. *Forest Ecology and Management* 312, 129-137.

The asterisk(*) indicates my role as a corresponding author.

Books

- [2] Kim, C., Y. Lee, Bae, S., S. Park, H. Bum (2017) *The 30 Years of National Ecosystem Survey*, National Institute of Ecology, ISBN: 9791186197967 93400
- [1] Kang, D., W. Kim, S. Park, J. Park, Bae, S., S. Lee, H. Jang, Y. Jeon, S. Choi, J. Ha (2017) *Data Book of National Ecosystem Survey*, National Institute of Ecology, ISBN: 9791186197981 (v.1) 94470; 9791186197998 (v.2) 94470; 9791186197905 (v.3) 94470
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Preprints

- [2] Bae, S.*, Westphal, C., Ammer, C., ... Knohl, A. (2025). Disentangling Landscape Heterogeneity: Compositional, Configurational, Vertical, and Temporal Heterogeneity. *Ecoevorxiv*. <https://doi.org/10.32942/X29P9Q>
- [1] Merkens, L., Mimet, A., Bae, S. et al. (2023). Connectivity at home: A data-driven connectivity modeling framework for home range movements in heterogeneous landscapes. *bioRxiv*, 2023.12.22.571399. <https://doi.org/10.1101/2023.12.22.571399>
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Media Appearances

- [1] “Artenschutz aus dem All”. *Gut zu wissen*. BR Fernsehen. 13.06.2020.
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Conference Presentation

- [20] Bae, S., Westphal, C., Ammer, C., ... Knohl, A. (2025). Disentangling Landscape Heterogeneity: Integrating Compositional, Configurational, Vertical, and Temporal Heterogeneity Across Land-Cover Types. The 54th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland. Würzburg, Germany, 1 Sep 2025. *Oral presentation*.
- [19] Bae, S., A. Mimet, T. Hauck, M. Mühlbauer, S. Meyer, W. Weisser. 3-D land-cover-based fine-scale urban connectivity model for bird functional groups. SFE²-GfÖ-EEF Joint meeting,
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International Conference on Ecological Sciences. Metz, France. 23 Nov 2022. *Poster presentation.*

- [18] **Bae, S.**, J. Müller, B. Förster, T. Hilmers, S. Hochrein, M. Jacobs, B. Leroy, H. Pretzsch, W. Weisser, O. Mitesser. Tracking the temporal dynamics of insect defoliation by high-resolution radar satellite data. The 50th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland, Virtual conference, 1 Sep 2021. *Oral presentation.*
- [17] **Bae, S.**, Levick, S. R., Heidrich, L., Magdon, P., Leutner, B. F., Wöllauer, S., . . . J. Müller. Mapping forest biodiversity of tiny organisms from space is not a vision any more. The 49th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland. Münster, Germany, 12 Sep 2019. *Oral presentation.*
- [16] **Bae, S.**, L. Heidrich, S. Levick, P. Magdon, T. Nauss, P. Krzystek, A. Taghavi, S. Wöllauer, J. Müller, Scale dependency of the heterogeneity-diversity relationship in temperate forests. The 48th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland, Wien, Austria, 12 Sep 2018. *Oral presentation.*
- [15] **Bae, S.**, B. Seo, Y. Hong, H. Yoon, and J. Lee, Cross-taxon congruence patterns of five taxon species richness in South Korea based on the 3rd National Ecosystem Survey. The 2016 Autumn Annual Conference of Korean Society of Environmental Impact Assessment. Jeju, South Korea. 21 Oct 2016. *Oral presentation.*
- [14] Lee, H., **S. Bae**, J. Ha, J. Cha, J. Lee, H. Yoon, C. Chung, S. Han, and H. Oh. A Classification of habitat type for mammals by the National Ecosystem Survey. The 2016 Autumn Annual Conference of Korean Society of Environmental Impact Assessment. Jeju, South Korea. 21 Oct 2016. *Oral presentation.*
- [13] Hong, Y., **S. Bae**, J. Lee, and Y. Yoo, The determinants of vegetation community diversity in South Korea based on the 3rd National Ecosystem Survey. The 2016 Autumn Annual Conference of Korean Society of Environmental Impact Assessment. Jeju, South Korea. 21 Oct 2016. *Oral presentation.*
- [12] Kang, D., **S. Bae**, and H. Yoon, 2016. Species diversity of freshwater fishes using the 3rd National Ecosystem Survey data. The Spring Symposium 2016 of Korean Journal of Ichthyology. Sangju, South Korea. 13 May 2016. *Poster presentation. (Best Poster Award)*
- [11] **Bae, S.**, J. Müller, J. C. Vogeler, K. T. Vierling, L.A. Vierling, D. Lee, A.T. Hudak, and S. Thorn. 2016. Modelling avian taxonomic, functional, and phylogenetic diversity in relation to 3-D forest structure. The Korean Symposium on Ecological and Environmental Science 2016. Suncheon, South Korea. 18 Feb. 2016. *Poster presentation.*
- [10] Kim, W., **S. Bae**, and H. Sung. 2015. Relationships among biomass, egg size, and nest attributes of Kentish plover. International Symposium of Science Museums 2015. Daejeon, South Korea. 22-23 Oct. 2015. *Poster presentation.*
- [9] **Bae, S.**, J. Mueller, D. Lee. 2015. Characterising forest succession stage and bird community with analysis of LiDAR-based forest structure. 36th International Symposium on Remote Sensing of Environment. Berlin, Germany. 11-15 May 2015. *Poster presentation.*
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- [8] Lee, M., S. Bae, E. Lee, Y. Cho, D. Lee. 2015. Effect of plant diversity and composition on predatory insect (Carabidae) diversity in Soyang watershed forest. The Korean Symposium on Ecological and Environmental Science 2015. Seoul, South Korea. 26-27 Feb. 2015. *Oral presentation.*
(Best Oral Presentation Award)
- [7] Cho, Y., S. Bae, E. Lee, M. Lee, D. Lee. 2015. Effect of environmental factors on foraging of honeybee in forest. The Korean Symposium on Ecological and Environmental Science 2015. Seoul, South Korea. 26-27 Feb. 2015. *Poster presentation. (Best Poster Award)*
- [6] Bae, S., S. Cho, B. Seo, and D. Lee. 2013. LiDAR-based quantification of the understory vegetation fraction (in Siheung, South Korea). The International Association for Ecology 2013. London, UK. 18-23 Aug. 2013. *Poster presentation.*
- [5] Bae, S. and D. Lee. 2012. Detecting, analyzing, and mapping vegetation structure using airborne LiDAR in South Korea. Biodiversity Asia 2012. Bangalore, India. 7-10 Aug. 2012. *Poster presentation.*
- [4] Bae, S., B. Reineking, M. Ewald, and J. Müller. 2012. Improving Habitat Suitability Modeling of Hazel Grouse using airborne LiDAR in the Bavarian forest national park. Young Modellers in Ecology 2012. Schweinfurt, Germany. 3-6 May 2012. *Oral presentation.*
- [3] Bae, S., Y. Kim, S. Moon, and D. Jang. 2009. The Use of LiDAR in Estimation of the Green Volume and the Building Volume. International Conference GEST 2009. Seoul, South Korea. 20-21 Nov. 2009. *Oral presentation.*
- [2] Kim, Y., H. Kim, S. Moon, and S. Bae. 2009. Ubiquitous Eco City planning in Korea - A project for the realization of Ecological City Planning and Ubiquitous Network Society. REAL CORP 2009 - 14th International Conference on Urban Planning, Regional Development and Information Society. Catalonia, Spain. 22-25 Apr. 2009. *Oral presentation.*
- [1] Moon, S., H. Kim, Kim, Y., and S. Bae. 2009. Biotope Mapping in Korea- History of Biotope mapping and consideration of a new method. REAL CORP 2009 - 14th International Conference on Urban Planning, Regional Development and Information Society. Catalonia, Spain. 22-25 Apr. 2009. *Oral presentation.*
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Ranking on Shortlists in Appointment Procedures	[2] Shortlisted among the top three candidates for a position in the Department of Forest Sciences, Seoul National University (2021)
	[1] Shortlisted among the top two candidates for a position in the Department of Biological Sciences, Chungbuk National University (2020)

AWARDS	Exchange Student Scholarship, Campus France	11/2013 – 4/2014
	Exchange Student Scholarship, TERRECO project funded by National Research Foundation of Korea	10/2011 – 2/2012

Scholarship for academic excellence for the best student (Gillchin Lim Scholarship), Graduate School of Environmental Studies, Seoul National Univ.	3/2011, 9/2006, 3/2006
Best Master Thesis Award, Department of Landscape Architecture, Seoul National Univ.	2/2008
Scholarship for academic excellence, Graduate School of Environmental Studies, Seoul National Univ.	9/2011, 9/2007, 9/2003, 3/2003, 3/2002, 9/2001, 3/2001
Leadership and service scholarship (Sangyong Nam Scholarship), Department of Architecture, Seoul National Univ.	9/2002, 3/2003, 9/2003

GRANTS	Successful grant-writing	2020
	National Research Foundation of Korea (No. 2020R1A6A3A03038391) KRW 45,000,000 (33,618 EUR) (1 years) <i>“Mapping national bird diversity by space-borne radar”</i>	
	Successful assistance in grant-writing	
	National Research Foundation of Korea (No. 2013-012874 and 2014-027238) (P.I.: Prof. Lee) KRW 100,154,000 (74,822 EUR) (2 years) <i>“Modelling and assessing the distribution and diversity of avian functional groups with analysis of LiDAR-based forest succession mosaic”</i> Role: Major contributor to proposal preparation (concept development and writing)	2013
	National Research Foundation of Korea (No. 2011-0024289 and 2012-0008361) (P.I.: Prof. Lee) KRW 106,135,000 (79,290 EUR) (2 years) <i>“Analyzing Multi-scale Network and Habitat Diversity of Forest Birds and Mammals by Using Graph Theory and LiDAR Image”</i>	2011

ACADEMIC	<ul style="list-style-type: none"> – Referee activities for 2 international journals
SERVICE	<ul style="list-style-type: none"> – 1 Master thesis supervision <ul style="list-style-type: none"> ○ Title: Monitoring Gypsy Moth Outbreak Using Sentinel-1 and Sentinel-2 Data – 2 Internship supervision – Session Chair of “Landscapes and Habitat Features for Biodiversity Conservation” at the GfÖ Annual Meeting 2025

RESEARCH EXPERIENCE	Researcher , “RESILIENCE: Understanding and enhancing land system resilience to environmental and socio-economic perturbations”	11/2022–12/2025
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Contribution: Classification of landscapes in Germany based on multiple environmental and socio-economic indicators, Analysis of landscape heterogeneity using remote sensing and data science approaches, Development of metrics for landscape heterogeneity, Supporting proposal writing for collaborative projects

Principal investigator: Prof. Dr. Alexander Knohl and Prof. Dr. Catrin Westphal
Lower Saxony Ministry of Science and Culture and the VolkswagenStiftung
through the program “ExzellenzStärken” (project number ZN3943)

Researcher, “*Faunistic spatial resistance analysis as a basis for biotope network planning*”

1/2022 – 3/2023

Contribution: Connectivity analysis, Land cover mapping using remote sensing data, Biodiversity data management

Principal investigator: Prof. Dr. Wolfgang Weisser

The Federal Ministry for Housing, Urban Development and Building, Germany

Researcher, “*Predicting defoliation of gypsy moth by Sentinel-1 remote sensing*”

2/2020 – 12/2021

Contribution: Remote sensing, Spatial landscape analysis

Principal investigator: Prof. Dr. Jörg Müller

Bavarian Ministry of Food, Agriculture and Forestry, Germany

Principal Investigator, “*Mapping national bird diversity by space-borne radar*”

9/2020 – 8/2021

National Research Foundation of Korea, South Korea

Researcher, “*TreeScape - Ecological mechanisms underpinning species diversity changes along landuse intensity in temperate forests - from trees to landscapes*”

4/2017 – 3/2020

Contribution: Remote sensing, Spatial landscape analysis

Principal investigator: Prof. Dr. Jörg Müller

DFG, Germany

Research fellow, “*The 2015 National Ecosystem Survey*”, “*The 2016 National*

8/2015 – 3/2017

Ecosystem Survey”, and “*The 2017 National Ecosystem Survey*”

Contribution: Spatial analysis of the National Ecosystem Survey data (species distribution modelling, biodiversity analysis, and the following sampling points planning)

Principal investigator: Dr. Jung-Hyo Lee

Ministry of Environment, Republic of Korea

Project manager, “*Modelling and assessing the distribution and diversity of avian functional groups with analysis of LiDAR-based forest succession mosaic*”

6/2013 – 5/2015

Contribution: Field survey (vegetation and bird), analyzing LiDAR data, developing avian functional diversity model

Principal investigator: Prof. Dowon Lee

National Research Foundation of Korea (Project number: 2013-012874 and 2014-027238)

Researcher , “ <i>COMBE MADAME: Studies on the habitat of the black grouse</i> ”	11/2013 –3/2014
Contribution: Analyzing LiDAR data, generating forest structure maps	
Principal investigator: Prof. Björn Reineking	
Électricité de France	
Researcher , “ <i>Analyzing Multi-scale Network and Habitat Diversity of Forest Birds and Mammals by Using Graph Theory and LiDAR Image</i> ”	9/2011 – 8/2013
Contribution: Field survey (vegetation and bird), analyzing LiDAR data, developing bird species diversity model	
Principal investigator: Prof. Dowon Lee	
National Research Foundation of Korea (Project number: 2011-0024289 and 2012-0008361)	
Researcher , “ <i>Complex terrain and ecological heterogeneity</i> ” (International research training group DFG/NRF)	10/2011 – 3/2012
Contribution: analyzing LiDAR data, developing species distribution model, participating international exchange	
Principal investigator: Prof. Dowon Lee and Prof. Björn Reineking	
National Research Foundation of Korea (Project number: 2011-0032202)	
Researcher , “ <i>Ubiquitous-based environmental and ecological planning and eco-city design technique development</i> ”	11/2008 – 1/2010
Contribution: Definition and design of ubiquitous based eco-city planning systems, environmental and ecological mapping of pilot test bed	
Principal investigator: Dr. Hyunsoo Kim	
Korea Ministry of Construction and Transportation (Project number: 07 High Tech A01)	
Researcher , “ <i>Master plan of Namyangju city based on environmental and ecological plan</i> ”	4/2009 – 10/2009
Contribution: Stepwise collaboration support for environmental and ecological mapping-planning-master plan-community design, estimation of urban ecological volume by using airborne LiDAR, analysis of human social environment	
Principal investigator: Dr. Hyunsoo Kim	
Namyangju City	
Researcher , “ <i>Biotope mapping on Siheung city</i> ”	7/2008 – 10/2009
Contribution: Estimation of urban ecological volume by using airborne LiDAR, biotope mapping of salt marsh by using airborne LiDAR, planning of conservation area and ecological network	
Principal investigator: Dr. Hyunsoo Kim	
Siheung City	
Researcher , “ <i>Technology on Developing Eco-Housing estate that Countermeasures Urban Climate Changes</i> ”	1/2008 – 1/2009

Contribution: Development of eco-housing prototype	
Principal investigator: Dr. Hyunsoo Kim	
Korea institute of construction technology (Project number: KICT 2008-071)	
Researcher , " <i>Environmental conservation comprehensive plan on Goyang city</i> "	1/2008 – 7/2008
Contribution: Assessment of current environment condition and issue, policy review, citizen questionnaire survey analysis, field survey, construction of environmental GIS	
Principal investigator: Dr. Hyunsoo Kim	
Goyang City	
Assistant Researcher , " <i>Biotope mapping on Goyang city</i> "	1/2008 – 7/2008
Contribution: Construction of connection between biotope map and environmental conservation plan, administrative support of research	
Principal investigator: Dr. Hyunsoo Kim	
Goyang City	
Assistant Researcher , " <i>Environmental and ecological model city planning of Okjeong district</i> "	8/2005 – 2/2006
Contribution: Green and blue network planning	
Principal investigator: Prof. Byoung-E Yang	
Korea Land Corporation	
Assistant Researcher , " <i>Ecological conservation and restoration planning of Andong and Imha dam regions</i> "	9/2004 – 5/2005
Contribution: Environment assessment	
Principal investigator: Dr. Wooil Byeon	
Korea Water Resources Corporation	
Assistant Researcher , " <i>A study on planning of a detention basin park</i> "	9/2004 – 5/2005
Contribution: Case study of detention basin parks and their design criteria	
Principal investigator: Dr. Wooil Byeon	
Korea Land Corporation	
