Emeritus Professor: Heiko Daniel

I am privileged to present to you Professor Heiko Daniel. Professor Daniel's lasting interest in soil science began at Hannover University in Germany where he completed his BSc and MSc, followed by his PhD and as a GRDC funded Research Fellow with the University of Western Australia. An enthusiasm for soil physics led Professor Daniel to UNE in 1993 as a Lecturer, with a strong research interest in soil carbon management and storage, followed by various and rapid promotions to the position of Associate Dean (Research) and later Deputy Dean in the Faculty of the Sciences, Interim PVC/Dean, Faculty Research Director, Faculty of Arts and Sciences, UNE University Research Director, Acting Pro Vice-Chancellor (Research), Pro Vice-Chancellor (Research) and finally, Deputy Vice-Chancellor (Research).

During his prestigious career with UNE, between 1993 – 2022, he has assumed major senior university committee functions for UNE's Academic Board, AB Research Committee, UNE HDR Scholarships Committee, UNE International Committee, VC's EEO Advisory Committee, and the University Collections Committee.

Professor Daniel's significant contributions to the UNE are further highlighted by his previous senior university functions associated with the Academic Board Standing Committee, Chair of the UNE Scholarships Committee, Chair of the Faculty Research & Research Training Committee, Faculty Teaching and Learning Committee, Faculty Management Committee, Faculty Equity Committee, Chair/Member of UNE Selection Committees, a member of UNE Promotions Committees, Acting HoS, Rural Science and Agriculture, Deputy Dean, Faculty of the Sciences, Acting PVC/Dean, Faculty of Arts and Sciences, Acting Deputy Vice-Chancellor (Research), Acting DVC (during periods of leave of DVC), and Acting VC (during periods of leave of VC).

A stunning example of Professor Daniel's exceptional leadership can be summarised where Faculty external research income grew by 80% from 2009 to 2012, representing in 2012 70% of total UNE research income.
ERA improvements from 2010 to 2012 for Faculty-based disciplines included ten 2-digit FoR areas rated 3 or higher (from six in 2010) and twelve 4-digit FoR areas rated 3 or higher (from six in 2010). ERA 2015 results (in relation to the ERA publication reference period 2008-2013) strongly demonstrated the continued success with these strategies, with the above disciplines all rated at ERA 3 or above, with eight disciplines rated at ERA 5 (from none in 2012), and a further nine disciplines rated at ERA 4 (from three in 2012). ERA 2018 results (in relation to the ERA publication reference period 2011-2016) further continued on this success, with now 18 disciplines rated at ERA 5, well above world standard, an outstanding achievement placing the University in the top quartile of Australian universities.

Professor Daniel has an outstanding reputation for research and scholarship. He has 30+ years' experience studying the effects of soil organic matter and other bonding agents on aggregate stability; aggregate protective capacity for soil carbon; soil carbon sequestration and storage; characterization and dynamics of soil carbon pools and related fractions; effects of compaction on soil strength and soil structure; water resource management; water infiltration characteristics; erosion risk on and behaviour of clay soils in northern NSW; soil conservation tillage practices; soil acidification and soil acidity; effects of organic amendment application on soil health; environmental impact of agriculture. As a result, Professor Daniel has 80+ refereed journal publications, book chapters and conference proceedings and his research has been published in high quality journals having impact influencing advancements to soil science and agriculture.

Throughout his career as a researcher, Professor Daniel was very influential in supporting numerous successful UNE research programs which have enhanced the international reputation of the institution. As a researcher, he underpinned these programs with many research grants from organisations such as GRDC, AINSE, CRDC, EU/DEST, and DAFF. As DVCR, of importance is Professor Daniels' contribution to UNE's overall research revenue. In 2020, research revenue increased by 22% on 2019 mainly from Category 1 and 2 grant funding, the result of a strong strategy put in place as part of framing the 2016-2020 UNE Research Plan.

In collaboration with UNE senior research leaders, UNE's DVCR achieved further strengthening of collaborative relationships with industry and government partners, specifically ACIAR, DFAT, DESE, NSW DPI, MLA and Horticulture Australia. Clear focus has been placed on industry through entities such as the Poultry Hub Australia, to further consolidate UNE's position to support the Australian Egg and Poultry Meat Industry into the future, in particular through sustained AgriFutures funding. Of note, a UNE DVCR supported Regional University Network bid team for Improving Mental Health Outcomes in RRR Australia were successful receiving funding of $3.66m in September 2021, paving the way for UNE leadership on this important matter and clear demonstration of UNE's support for their academics.

During the progression of his roles, Professor Daniel has diligently continued to develop research students as a supervisor/co-supervisor of 12 students at the honours level in the Bachelor of Rural Science, Bachelor of Natural Resources and Bachelor of Science programs, 4 at the research Master level and 15 at Ph.D. level (Principal Supervisor of 12 PhDs); tracking at 100% completion rate in relation to PhD candidates.

Professor Daniel has 24 years teaching experience, including the conceptualisation, design and implementation of new courses in Soil Physics in the Bachelor of Rural Science and the Bachelor of Natural Resources programs at UNE, and distance education courses for Undergraduate, Graduate Diploma and Course-work Masters students. Professor Daniel has had substantial involvement in reshaping teaching towards high-quality learning and more cost-effective and flexible delivery systems, based on new developments in educational theory and application of new educational technologies. Professor Daniel was a finalist of the 2000 inaugural UniServe Science Teaching Award for the Oz Soils multimedia flexible learning program.

In conclusion, Professor Daniel has served the University with high distinction, he is an outstanding leader, scholar and researcher who has made impressive, meaningful and lasting contributions both to his discipline and to UNE.