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### **Mapping local science and technology research: A profile based on the Journal of National Science Foundation of Sri Lanka**

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Bibliometrics has become a standard tool of science policy and research management over the past few decades. Hence, mapping research using bibliometric indicators is increasingly used in evaluation processes at universities and public and private research institutions. Since the standard of research in a country is judged by the standard of its research journals, the mapping of research activities using journals is adopted as a globally accepted technique. Such a study may prove useful for science planners and policy makers for gaining macro insights into the country's S&T system. The main objective of this study is to examine the strengths of R&D in the country, strong and weaker areas of research and dynamics of research across institutions based on the research publications that appeared in the Journal of the National Science Foundation (JNSF) of Sri Lanka from 1988-2008. The bibliographic data of all full research papers were downloaded from the Journal database and a percentage analysis was performed. Accordingly, a total of 533 papers had been published in the JNSF over the past 20 years. The papers were categorized into 12 fields viz., plant sciences, chemical sciences, agricultural sciences, food sciences, engineering sciences, microbiology, biochemistry, biotechnology etc. The Sri Lankan contribution to chemical sciences was found to be highest (18.8%) followed by plant sciences (17.8%), agricultural sciences (11.8%), zoological sciences (10.7%), biochemistry (6.4%) and engineering sciences (6.0%). With regard to universities, the contribution to JNSF by research institutions has been very low and the highest contribution being from the fields of agricultural and food sciences. Of the local universities, only four universities namely the University of Peradeniya (UOP), University of Colombo (UOC), University of Sri Jayewardenepura (USJ) and University of Kelaniya (UOK) were the most frequent contributors. The study indicated that UOP was strongest in the field of chemical sciences while UOC was strongest in the field of plant sciences. The modern research areas viz., biochemistry were seen to be most active in the USJ. Both UOP and UOK had fared well in microbiology research. Research in biotechnology seemed to be active in UOP followed by UOC. Compared to the traditional subject fields, the percentage contribution of modern research areas were very low. The newly established universities did not frequently contribute towards R&D publications, which is an issue that needs the attention of policy makers. The gap in research publication output could be reduced by strengthening the R&D capabilities in the newly established universities.

**Keywords:** Bibliometric analysis, Mapping S&T research, R&D publication, Science policy