higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MINISTERIAL REPORT ON THE EVALUATION OF THE 2010 INSTITUTIONAL RESEARCH PUBLICATIONS OUTPUTS

2011

Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions (2003)

Published by the Department of Higher Education & Training
123 Schoeman Street
Pretoria

Private Bag X 174
Pretoria
0001

Tel: +27 (12) 312 5252
Fax: + 27 (12) 325 4419

Web site: http://www.dhet.gov.za/

Table of Contents

List of Annexures

A. Introduction

1. In terms of the *Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions* (2003), all public higher education institutions must annually submit their subsidy funding claims for research outputs, in the form of publications, to the Department of Higher Education and Training. The Department allocates research subsidy based on unit calculations for approved publications.

2. The policy aims to 'encourage research productivity by rewarding quality research output at public higher education institutions'. It hopes to 'enhance productivity by recognising the major types of research output produced by higher education institutions and further use appropriate proxies to determine the quality of such output'.

3. The policy defines research as "original, systematic investigation undertaken in order to gain new knowledge and understanding". The policy indicates specific textual outputs for subsidy and indicates that publications should "disseminate original research and new developments within specific disciplines, sub-disciplines or fields of study."

4. The Department is aware of other research that takes place at public institutions of higher learning and that recognition for subsidy purposes and value or quality of the research are not synonymous. Among other forms of research which are not recognised are creative and performing outputs, artefacts, patents, textbooks, reports and non-accredited journal articles. In this regard, institutional policies should take cognisance of these and encourage growth in the types of research which align with the institution's missions and vision.

5. The Department is currently working on developing a policy framework for the recognition of creative outputs. A Working Group has been established and the members are preparing draft documents explaining criteria and processes for different sub-fields. The sub-fields which have been identified are: Fine Arts, Music, Design & Architecture, Literary Arts, Film & Television and Drama & Theatre. The Working Group has already consulted with the sector and the Department is awaiting its report in 2012.

6. This document reports on the process, procedures and outcomes of the research publications outputs for 2010 (assessed in 2011). It contains information on and analysis of the number of units awarded to institutions for subsidy earning research outputs in books, published conference proceedings and accredited journals.

7. Universities receive research subsidy for weighted research outputs. Weighted research output is calculated on the basis of set norms (targets) per permanently employed academic/researcher at each institution and includes subsidy units for research Masters and Doctoral graduate outputs. There are often differences between the norms (targets) and the actual outputs. However, this report mainly deals with accredited research publications. In cases where weighted research output (including Masters and Doctoral graduates) are discussed, this will be clearly stated.

B. Process and Procedures

8. The Department received claims for published research outputs for 2010 from the majority of institutions before the deadline of 15 May 2011 or within a few days thereafter. However, two institutions (the University of Witwatersrand and Walter Sisulu University) only submitted in June 2011 after extensions were requested and granted. Adherence to the deadline was not as good as in 2010 when all submissions were received in May.

9. The Directorate evaluated all submissions administratively and technically and identified additional information required to improve the quality of the submissions. The number of institutions which experienced staff changes in the research offices since the last submission was high, and this affected the quality of some submissions. There are also some institutions which continue to experience problems despite assistance from the Department. The number of requests for additional information was relatively high at these institutions, while at other institutions requests were lower than in 2010.

10. Most institutions were able to provide the necessary information quickly. However, in some cases problems were encountered as a result of research office staff and academics being on leave or because the type of additional information required (such as evidence of peer review) could not be obtained within the short time available.

11. The additional information was then added to the submissions and those that still had problems were identified for consideration by the Department's internal panel. This panel sat on 5 July 2011 and identified which submissions should be returned to institutions before the meeting of the Research Outputs Evaluation Panel.

12. The number of claims returned after this panel was higher than in previous years. The main reason for these returns was the submission of books and conference proceedings without any evidence of peer review. **Institutions are urged not to submit claims when all the supporting documentation is not available**. A smaller number of submissions were returned as they were clearly textbooks, non-accredited journals, theses or other publications which are not subsidised according to the policy; or because the peer review process was not as required. In a few cases other necessary supporting documentation was not available (such as evidence of affiliation or explanations for late submissions). These problems should be solved at

institutional level before submission to the Department. For this reason, it is important that all research office staff members are well acquainted with the Policy and that all institutions hold internal panels before submission to the Department. Only those claims which meet the policy requirements should be submitted.

13. Due to the high staff turnover in the past year, persistent problems at specific institutions and the proposed introduction of some improvements to the Policy which will affect submission processes, the Department plans to hold a workshop in 2012. This will assist staff with understanding the policy requirements before the next submission cycle. **However, institutions are also encouraged to work with other institutions in their region to learn from each other, especially when new members of staff are appointed.**

14. On 01 August 2011 a specialist Law Panel was convened. The panel was constituted at the request of the Research Outputs Evaluation Panel which had noted a high rejection rate in law publications over the past few years. The panel recognised that the law profession focuses on different types of scholarly work and it was, therefore, decided that a specialist panel could feed into the panel's work. The Law Panel was chaired by Prof R Midgley, a member of the Research Outputs Evaluation Panel, and was also attended by Prof P Nevhutalu (Chair of the Research Outputs Evaluation Panel). The Law Panel assessed all law submissions received in 2011 and consisted of the following members:

Prof V Lawack-Davids (Commercial & Mercantile law)	NMMU
Prof NL Mahao (Customary & Public law)	UNISA
Prof D Olowu (Public law & Legal Philosophy)	NWU
Prof PJ Schwikkard (Public & Procedural law)	UCT

15. On 02 and 03 August 2011 the Research Outputs Evaluation Panel, chaired by Prof Prins Nevhutalu, Deputy Vice-Chancellor: Research, Innovation &

Partnerships at Tshwane University of Technology (TUT), met to evaluate research outputs in the form of book publications and published conference proceedings. Other members of the Panel are:

Prof R Bharuthram	DVR: Research, University of the Western Cape
Prof P Clayton	DVC: Research & Development, Rhodes University
Prof R Crewe	Vice Principal: Faculties, University of Pretoria
Prof W Gevers	Chair: Scholarly Publishing Committee, ASSAf
Dr A Kaniki	Executive Director: Knowledge Management Systems, NRF
Prof T Marwala	Executive Dean: Engineering & Built Environment, University of Johannesburg
Prof J Muller	Deputy Dean: Research, University of Cape Town
Prof A Parekh	DVC: Academic, University of Johannesburg
Prof C Potgieter	Dean: Research, University of Kwa-Zulu Natal
Prof R Midgley	DVC: Academic Affairs, University of Fort Hare

16. The Panel was also joined by Mr M Mabizela (Chief Director: University Policy and Development) and was assisted by the following members of the University Policy and Development Support Directorate: Dr G Simpson, Mr S Motlhanke, Ms N Luruli, Ms P Manqele, Ms T Mantolo and Mr W Ntuli.

17. The Panel found that, due to submissions generally meeting the policy requirements and the Directorate's work in technically assessing claims, assessment was able to take place quickly and without any delays.

18. The Directorate recorded the decisions of the Panel and calculated the number of units allocated to each institution for publications in scholarly books and approved published conference proceedings. The Directorate also verified audited claims for publications in accredited journals submitted by the universities and then calculated final unit allocations to each institution.

19. **In summary**, the evaluation process carried out by the Panel was completed successfully with few delays. However, in general, there were more problems with the institutions' submissions, more claims were returned before the panel sat and more institutions missed the 15 May deadline than in 2010.

C. Overall Research Publications Outputs

20. The total approved research publications outputs for 2010 (published in journals, books and conference proceedings) amounted to 9747.80 units (compared to 9109.34 units in 2009) (**Annexure 1 and 2**). Journal publications were once again the largest contributor and main determinants of the growth pattern, although their percentage share of all outputs dropped to the benefit of published conference proceedings. Journal publications accounted for 88% (91% in 2009) of the total units, books for 4% (as in 2009) and conference proceedings for 8% (up from 5% in 2009). These ratios have been relatively constant over the past few years and the growth in percentage output in conference proceedings needs further consideration **(Annexure 3 and 4)**.

21. It is evident that, while output in books is increasing steadily, the percentage of output published in books remains low. This is in contrast to conference proceedings where the percentage increases annually. One possible explanation is that the acceptance rate for conferences is improving annually at a faster rate than the acceptance rate for books and, as a result, conferences are taking a bigger share of total research output **(Annexure 19).** The panel noted that over the past few years there has been improvement in the quality of the conferences organised and attended by South African academics. In this sense, the policy is having a positive effect on the academy. The panel also noted that Universities of Technology (UoTs) seem to have developed a better understanding of the policy when it comes to conference proceedings. The acceptance rate is, therefore, increasing both

due to better quality conferences and due to a better understanding of the policy. The panel recognised the need to drive the sector in the same way with regard to quality book publications, which need to increase across all fields.

22. There has been a general steady increase in research publications outputs since 2005. The 2010 total output of 9747.80 units reflects an increase of 7% (compared with 9% growth from 2008 to 2009). From 2009 to 2010 journal output increased by 4% (compared with 8% last year); book publications by 7% (compared with 41% last year) and conference proceedings by 56% - a huge increase compared with 6% from 2008 to 2009. The areas of growth fluctuate from year to year and are, therefore, not a matter for concern unless very low or high growth is evident in one type of publication over a number of years.

23. There was growth from 2009 to 2010 of over 20% at eight institutions, namely Vaal University of Technology, Central University of Technology, TUT, UJ, North West University, Mangosuthu University of Technology, WSU and University of Limpopo. In the past, such high growth rates have mainly been evident at institutions with relatively low output (and therefore low base), where a higher growth rate is easier to achieve. However, some of the institutions listed above have relatively high output figures. Furthermore, of these institutions, the majority also show high annualised growth rates (over 10%) since 2005, which fluctuate less than annual increases. The exceptions are WSU (8%) and UL (-2%).

24. There is concern regarding the negative annualised (since 2005) growth rate of -2% at UL. However, growth from 2009 to 2010 is 26%, which suggests a positive turnaround and the Department hopes that this will be sustained.

25. From 2008 to 2009 four institutions showed a drop in total research output (TUT, UL, NWU and UNISA), but all four experienced high growth from 2009

to 2010 (as discussed above, and UNISA's growth was 17%). Small fluctuations in output on an annual basis can be expected and are not cause for alarm. From 2009 to 2010 the following institutions experienced a drop in total output: Durban University of Technology, University of Zululand, UWC, RU, University of Stellenbosch, University of the Free State and UP. Some of these had high growth from 2008 to 2009 and were not able to sustain that growth.

26. In 2010, the Department collected data for all types of publications (journals, books and proceedings) by Classification of Education Subject Matter (CESM) category for the first time. It is now possible to compare output by CESM over two years. However, the CESM categories have changed, making direct analysis harder. Analysis of this data provides some insight into which fields publish more and in which types of publications. Institutions can also use this data for research development purposes. The highest output by CESM category (all those with a % of total publications over 6%) is shown in the table below:

1st Order CESM Categories	**Subject**	**% by CESM 2009**	**% by CESM 2010**	**Output per Capita**
9	Health Professions & related Clinical Sciences	15.36%	**15.39%**	**0.77**
14	Physical Sciences	16.19% (together with Life Sciences as one CESM)	**11.21%**	**1.08**
20	Social Sciences	9.02%	**9.03%**	**1.07**
8	Engineering	6.80%	**7.71%**	**0.61**
13	Life Sciences		**7.49%**	**0.67**
17	Philosophy, Religion & Theology	8.05%	**6.8%**	**2.64**
12	Law	6.33%	**6.75%**	**0.92**
4	Business, Economics & Management studies		**6.15%**	**0.24**
TOTAL			**70.53%**	

27. In 2009 both Agriculture & Renewable Natural Resources and Language, Linguistics & Literature appeared in this list of highest CESM categories while Business, Economics & Management Studies did not. In total, just over 70% of all publications were in these 8 CESM categories. Total output for other CESM categories can be seen in **Annexure 5**.

28. The CESM categories with very low output (below 1.5%) are listed below. It must be remembered that this is actual output numbers and not per staff member. Many of these categories produce different output types (such as CESM 2 and 3) and others are very small fields (CESM 16) or are more practical/ vocational in their focus (CESM 5 and 10).

    CESM 2: Architecture and Built Environment (1.04%)
    CESM 3: Visual and Performing Arts (1.31%)
    CESM 5: Communication, Journalism & Related Studies (1.08%)
    CESM 10: Family Ecology and Consumer Sciences (0.21%)
    CESM 16: Military Sciences (0.30%)
    CESM 19: Public Management & Services (1.35%)

29. Due to the size of different disciplines, the number of staff in the national system per CESM category is of importance when considering output by CESM **(Annexure 6A & 6B)**. It is interesting to note that some of those listed as the lowest output CESM categories (such as Military Sciences) perform best when output per staff member (or per capita) is calculated. This highlights the fact that these are small disciplines with low staff numbers, and this is the reason for low output (not low productivity). It must also be remembered that some staff members may perform research in a CESM where they are not appointed (for instance, some of those in Social Sciences may do research which has been included under Military Sciences).

30. The CESM categories with highest per capita output in 2010 are Military Sciences; Philosophy, Religion & Theology; Agriculture, Agricultural

Operations & Related Sciences; Physical Sciences and Social Sciences. Three of these are also on the table above for highest total output.

31. The CESM categories with the lowest per capita output are Visual and Performing Arts; Business, Economics & Management Studies; Computer & Information Sciences and Family Ecology and Consumer Sciences. Of these, Visual and Performing Arts and Family Ecology and Consumer Sciences are among the CESM categories identified with very low output, and both of them are fields which do not focus on textual output. The low per capita research output for Business, Economics & Management Studies and Computer & Information Sciences needs further investigation considering the important nature of these subjects for development in South Africa.

32. In 2010, total publications by broad field were **(Annexure 7):**
    Science, Engineering & Technology (SET): 54.68% (52.29% in 2009);
    Humanities: 33.85% (37.88% in 2009);
    Education: 6.15% (4.72% in 2009); and
    Business & Commerce: 5.32% (5.11% in 2009).

33. The main change in output by field is a drop in the Humanities and growth in all other fields.

34. In the National Plan for Higher Education (2001), a target ratio for graduates by broad field is set, namely: SET: Business & Commerce: Humanities at 30:30:40. It would, therefore, be expected that a similar ratio would be in place for staff numbers and research output. However, the staff figures show a ratio of 49:16:35 and the research output a ratio of 55:5:40 respectively **(Annexure 8)**. These figures suggest that Business & Commerce is proportionally understaffed. Business & Commerce was also highlighted as one of the fields with low output per capita.

35. Output for each broad field is not spread evenly across all types of publication (**Annexure 9).** This will be discussed in more detail under the sections dealing with journals, books and conference proceedings.

36. **In summary**, in the last few years there has been growth in the total number of outputs (or units) in all three types of publications. This growth has not been consistent in any type of publication. Annual fluctuations take place at institutional and national level and also by discipline. These are not cause for concern as long as the general trajectory continues to be positive. Output by CESM and field has not changed dramatically since 2009, and clear areas where research needs to be stimulated can be identified.

D. Outputs by Institutions and Institutional Type

37. The highest number of units (13% of total units for the sector) was accrued by UCT. Since 2009, UCT has taken over from UP (12%) as the largest producer of research output. UCT and UP are followed by the other institutions as per the tables below.

Table 1: Percentage of Total Output						
Institution	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
UCT	12.3%	11.3%	13.1%	13%	13%	**12.9%**
UP	15.2%	15%	14.9%	14.2%	13%	**12.2%**
UKZN	13.1%	13.5%	11.3%	11.7%	12.2%	**11.8%**
SU	11.4%	11.7%	11.4%	11.4%	11.5%	**10.6%**
Wits	10.5%	10.5%	11.7%	10.1%	10.1%	**9.6%**
TOTAL	**62.5%**	**62%**	**62.4%**	**60.4%**	**59.8%**	**57%**

Table 2: Percentage of Total Output						
Institution	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
UNISA	7.2%	7.3%	7.1%	7.8%	6.9%	**7.5%**
UJ	4.5%	4.8%	4.5%	4.7%	5.1%	**6.3%**
NW	4.5%	4.5%	4.9%	6%	4.9%	**6.0%**
UFS	5.7%	5.8%	6.1%	5.3%	5.6%	**5.1%**
RU	3.5%	3.7%	3.5%	4%	3.9%	**3.3%**
UWC	2.3%	2.5%	2.8%	2.9%	3.1%	**2.7%**
NMMU	2.9%	2.3%	2.3%	2.2%	2.5%	**2.6%**
TOTAL	**30.6%**	**30.9%**	**31.2%**	**32.9%**	**32%**	**33.6%**

Table 3: Percentage of Total Output						
Institution	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
TUT	1.2%	1.3%	1.3%	1.7%	1.4%	**1.9%**
CPUT	0.9%	0.8%	0.6%	1%	1.4%	**1.6%**
UFH	0.7%	0.9%	0.9%	1%	1.5%	**1.5%**
UL	1.5%	1.3%	1.3%	1%	0.8%	**1%**
UV	0.4%	0.2%	0.2%	0.4%	0.6%	**0.8%**
UZ	0.6%	0.7%	0.6%	0.8%	0.8%	**0.7%**
WSU	0.5%	0.3%	0.2%	0.2%	0.3%	**0.5%**
DUT	0.3%	0.4%	0.5%	0.3%	0.5%	**0.5%**
VUT	0.2%	0.3%	0.2%	0.2%	0.4%	**0.5%**
CUT	0.4%	0.5%	0.4%	0.3%	0.4%	**0.4%**
MUT	0%	0.1%	0%	0%	0%	**0.1%**
TOTAL	**6.7%**	**6.8%**	**6.2%**	**6.9%**	**8.1%**	**9.4%**

38. As can be expected, the percentage share of overall output by the five institutions shown in Table 1 has been dropping steadily over the past six years, although the rate of decline has increased in the past couple of years. In 2010 these five institutions produced 57% of all research publications compared to 60% in 2009. This is not a sign of decline in research output at these institutions, but rather points to positive growth at other institutions.

39. The seven institutions shown in Table 2 have increased their percentage share from 32% in 2009 to 33.6% in 2010. This is largely as a result of output by UNISA and UJ. The gap between percentage share for institutions on Table 1 and some on Table 2 is shrinking. For instance, while Wits produced 9.6% of total publications (a percentage which is in decline), UNISA produced 7.5% and is growing. It must be remembered that size of institution is an important determinant in these figures, making per capita output a more effective measure.

40. The eleven institutions shown in Table 3 also increased their percentage share of total output (from 8.1% to 9.4%). While the increase is not as high as from 2008 to 2009, it is positive to see that this growth has been sustained and even expanded. It should, however, be noted that these eleven institutions continue to produce less than 10% of total output. Further interventions to support growth are required.

41. Total percentage output (as reflected above) and percentage output in journals (as discussed in section E) is very similar, as can be expected considering the high percentage of total output which is published in journals. Further analysis is done for journal publications.

42. For the purposes of this report, institutions have been ***clustered*** **according to publications output units per permanent academic staff member** (or per capita output) at the institution. Due to the impact of institution size on clustering, the clusters do not correspond with the divisions as per the tables above. The main change is that RU is in Cluster A and the order within the Clusters is different. The tables below show the clusters (**Annexure 1 and 10)**. Please note that while per capita output at UP for 2009 and 2010 is lower than at UKZN, it remains in Cluster A based on Average output from 2006-2010.

Cluster A: Publications Output per capita

Institution	2006	2007	2008	2009	2010	Average 06-10
UCT	1.07	1.14	1.16	1.23	**1.28**	**1.18**
SU	1.21	1.05	1.09	1.20	**1.13**	**1.14**
RU	0.92	0.86	1.07	1.09	**1.01**	**0.99**
Wits	0.67	0.92	0.86	0.94	**0.94**	**0.87**
UP	0.76	0.71	0.72	0.73	**0.71**	**0.73**
TOTAL	**0.93**	**0.94**	**0.98**	**1.04**	**1.05**	**0.98**

Cluster B: Publications Output per capita

Institution	2006	2007	2008	2009	2010	Average 06-10
UKZN	0.68	0.57	0.66	0.76	**0.82**	**0.70**
UJ	0.39	0.40	0.46	0.55	**0.69**	**0.50**
UFS	0.71	0.67	0.58	0.66	**0.62**	**0.65**
NW	0.40	0.42	0.54	0.45	**0.54**	**0.47**
UNISA	0.44	0.41	0.50	0.45	**0.52**	**0.46**
UWC	0.47	0.42	0.46	0.53	**0.52**	**0.48**
NMMU	0.37	0.34	0.35	0.40	**0.45**	**0.38**
TOTAL	**0.49**	**0.46**	**0.51**	**0.54**	**0.59**	**0.51**

Cluster C: Publications Output per capita						
Institution	**2006**	**2007**	**2008**	**2009**	**2010**	**Average 06-10**
UFH	0.28	0.25	0.26	0.39	**0.49**	**0.33**
UZ	0.26	0.20	0.27	0.30	**0.26**	**0.26**
UV	0.07	0.06	0.12	0.19	**0.24**	**0.14**
TUT	0.12	0.13	0.18	0.16	**0.23**	**0.16**
CPUT	0.10	0.07	0.12	0.18	**0.21**	**0.14**
CUT	0.17	0.13	0.11	0.14	**0.15**	**0.14**
VUT	0.07	0.06	0.07	0.12	**0.14**	**0.09**
UL	0.13	0.13	0.11	0.10	**0.12**	**0.12**
WSU	0.04	0.04	0.03	0.04	**0.09**	**0.04**
DUT	0.06	0.06	0.05	0.09	**0.08**	**0.07**
MUT	0.05	0.01	0.01	0.03	**0.05**	**0.03**
TOTAL	**0.12**	**0.10**	**0.12**	**0.16**	**0.19**	**0.14**

43. The average publications output units per permanent academic staff member (or **per capita output**) for all institutions for 2010 was **0.58 units**, an increase from 0.56 units in 2009. This refers to per capita output excluding units for research Masters and PhD graduates. Growth in per capita output has increased since 2006, with a slight drop in 2007. This shows that research production is increasing per academic and not only as a result of a growing number of academics. (**Annexure 10)**. **It is important for institutions to ensure that this growth is not taking place at the cost of teaching and learning or at the cost of quality research.**

44. As in 2009, UCT had the highest per capita output. In 2010 output at UCT increased to 1.28 units per permanent full-time academic staff member, exceeding the target of 1.25 units per capita without including units for Masters and PhD graduates for the first time. SU and RU had per capita output of over one unit per staff member. Of the comprehensive universities, UJ had the highest per capita output (0.69 units compared to 0.55 in 2009) and TUT (0.23 units) replaced CPUT as the highest among the UoTs. It should be remembered that the targets for comprehensives differ for each institution and the target for UoT is 0.5 units. However, none of these institutions reached the target without including Masters and PhD graduates.

45. The average publications outputs per staff member at the 'traditional' universities was 0.74 units (0.73 in 2009); at the comprehensives it was 0.48 units (0.4 in 2009) and at the UoTs it was 0.17 units (0.14 in 2009). The highest growth in per capita output is evident at the UoTs (23%) followed by the comprehensive universities (20%) and finally the traditional universities with 1%. It is encouraging to note such high growth in the UoT sector.

46. Despite the overall improvement in per capita output across the sector and at different types of institutions, a number of traditional universities as well as DUT showed a decline in per capita output from 2009 to 2010. In fact, the only traditional universities to show an improvement in per capita output were UCT, UKZN, NWU, UFH, UV and UL. It is of concern that most of those who traditionally produce high quantities of research output have dropped this cycle, unless this is due to an increased focused on quality. However, as previously noted, annual fluctuations should be treated with caution until trends are evidenced.

47. When comparing per capita output for 2010 with that of 2006, decreases are evident at SU, UFS, UL (very slight) and CUT, while both UZ and MUT show no change. For SU, 2006 appears to have been a high, with a drop in 2007. Substantial and continuous growth in per capita output can be seen at UV (0.07 to 0.24), while significant growth (over 75%) it evident at CPUT, VUT, TUT, WSU, UFH and UJ.

48. When considering weighted research output per capita (i.e. including Research Masters and PhD graduates in the per capita calculation), SU replaces UCT as the highest per capita output institution **(Annexure 12)**. This means that per staff member, SU produces more weighted research graduates than UCT. This was also the case in 2009. Weighted per capita output at US is 2.37 units, which is 189% of the expected norm for traditional universities (1.25 units).

49. When considering weighted output, the following institutions (in the same order) exceeded their expected norm: SU, UCT, RU, Wits, NMMU, UKZN, UJ, UP, UFS, UWC and UFH. It must be remembered that the norm for the Comprehensive Universities (i.e. of those included here NMMU and UJ) is lower than for the traditional universities. It is encouraging to notice that, for the first time, previously disadvantaged and more comprehensive institutions are exceeding their targets. However, a focus on quality research and quality postgraduates must be maintained. In the previous cycle, the only institutions to exceed the target were: SU, UCT, RU, Wits, UKZN, UP, UFS and UJ.

50. All of Cluster A institutions exceeded their target. Of Cluster B institutions, only UNISA and NWU did not exceed their target. For the first time a Cluster C institution, UFH, has exceeded its target of 1.25 units per capita.

51. None of the UoTs met the target (of 0.5 for UoTs) although TUT is nearing the target with 0.44 units per capita, or 88% of the expected norm.

52. The averages for all types of institution experienced an increase in weighted per capita output from 2009 to 2010. The average for traditional universities has increased from 1.40 to 1.46 units per capita, for comprehensives from 0.70 to 0.78 units per capita and for UoTs from 0.30 to 0.31. Overall, weighted output per capita has increased from 1.07 to 1.11 units per capita.

53. Average output per capita weighted vs output per capita for publications only differs as follows for the different types of institutions:

    Traditional Universities: 1.46 vs 0.74;
    Comprehensive Universities: 0.78 vs 0.48; and
    Universities of Technology: 0.31 vs 0.17.

54. There are various factors which impact on the ability of an institution or academic to engage in quality research. While developing a research culture

and accessing research funds are of the utmost importance, staff: student ratios and academic qualifications also impact on the quantity and quality of research undertaken. ***It is for this reason that the Department encourages all institutions to develop Research Policies to support the growth in quality research at their institution***. It is only when all the factors negatively affecting research production at a specific institution are taken into account that solutions to these problems can be determined.

55. **Annexure 11** shows staff numbers, per capita output, student numbers and staff qualifications by Cluster. The percentage of students (excluding UNISA and its students) in Cluster A is 24%: Cluster B 37% and Cluster C 39%. In terms of percentage of staff (also excluding UNISA and in the same order) it is 32:34:34 respectively.

56. However, when looking at staff: student ratios, it is evident that the average ratio for Cluster A is 1:28, in Cluster B it is 1:33 (when UNISA is removed) and in Cluster C it is 1:48. UNISA has been removed due to the very different nature of distance education and the higher staff: student ratios as a result.

57. These staff: student averages clearly show the heavier teaching load per academic in the Cluster C institutions which may impact on research productivity. These teaching loads may also impact on quality of teaching and throughput rates, but further investigation is needed. It should be remembered that some institutions focus more on undergraduate teaching and less on research, and that having a different focus or mission is important for the system as a whole.

58. When considering Cluster A and Cluster B, current per capita figures point to UP belonging in Cluster B and UKZN in Cluster A. This is also reflected in staff: student ratios, where UP's ratio is 1:34 and UKZN's ratio is 1:29, which

is closer to the average for Cluster A and lower than all other institutions in Cluster B.

59. It is important to note UJ's high staff: student ratio (1:55) despite relatively high output per capita and growth. Similarly, when considering Cluster C there are some institutions with low staff: student ratios (UFH, UL, University of Venda), which confirms that other factors must also be taken into account. Institutions must ensure that research development does not take place at the cost of quality or at the cost of teaching and learning.

60. Staff qualifications are an important element in determining research capacity as it is generally staff with PhDs or Masters who drive the research at the institution. The percentage of staff with PhDs is highest in Cluster A (50%). Furthermore, within the Cluster there is almost a parallel in order between the highest per capita output (UCT) with the highest percentage of staff with a PhD (61%) and the lowest per capita output (UP) and the lowest number of staff with a PhD (39%).

61. The average number of staff with a PhD is 38% for Cluster B and 18% for Cluster C. This drop is also reflected in the lower per capita output figures for this Cluster. Conversely, percentage of staff with a Masters as their highest qualification is highest in Cluster C (41%), but is the same for Clusters A and B (32%). This can be expected considering the low number of staff with a PhD in Cluster C. When the figures are combined, the percentage of staff with a Masters or PhD for Cluster A is 82%, for Cluster B it is 70% and for Cluster C it is 59%. Staff qualifications clearly play an important role in research productivity, especially those with a PhD.

62. When considering individual institutions, UFS and NWU have a high proportion of staff with a PhD, but this is not reflected in their per capita output. However, they both (especially NWU) have relatively high staff:

student ratios. UJ is an exception in this regard as it has a low number of staff with a PhD (22%) and high staff: student ratios.

63. In Cluster C, UFH, UV and UZ have a relatively high proportion of staff with a PhD (over 30%) and it should be remembered that both UFH and UV have lower staff: student ratios rather other institutions in this cluster. Similarly, both have experienced substantial growth over the past few years. UFH has had an annualised growth rate of 18% since 2005 and per capita output has increased from 0.28 in 2006 to 0.49 in 2010. UV has an annualised growth rate since 2005 of 19%, year on year growth of 32% and per capita output increasing from 0.07 units in 2006 to 0.24 units in 2010.

64. **In summary**, 2010 outputs show positive growth across the system as a whole. There have been some minor annual fluctuations, but most of these are not of major concern. The Department emphasises the need for research to be of a high quality.

E. Publications in Journals

65. In 2010, journal publications increased from 8256.61 units in 2009 to **8603.36 units (4.2% growth)** (**Annexure 13a**). This growth is below the 8% increase in journal publications from 2008 to 2009 and slightly below the annualised growth rate since 2005 of 4.35%. However, it is clear that institutions continue to focus on journals as a form of publication.

66. As in previous years, the majority of units across the system (88%) were allocated to publications in journals (**Annexure 1**), although it is the first year that this percentage has fallen below 90%. In fact, every institution accrued at least 75% of their units for publications in journals. As such, the analysis of data of publications in journals closely resembles that of overall research publications in the sector.

67. From 2008 to 2009 journal output dropped at NWU, UL, UNISA and TUT. However, all these institutions experienced positive growth from 2009 to 2010, suggesting that small annual fluctuations in output can be expected and are not cause for concern. From 2009 to 2010 nine institutions experienced a drop in journal outputs - six of these are institutions with stable growth since the introduction of the policy, namely UP, UKZN, SU, UFS, RU and UWC. The other institutions with a drop are UZ, CUT and DUT **(Annexure 13b).**

68. A positive development is at WSU where journal output increased from 20.86 units in 2009 to 46.90 units in 2010.

69. As was the case in 2009, high growth rates from 2009 to 2010 are again evident at many of the institutions in Cluster C (and some in Cluster B). Annual growth of over 20% is evident at MUT, WSU, UL, TUT, CPUT, NWU and UJ.

70. As in previous years, UP produced the highest proportion of journal publications units (12.65%). However, while UP continues to produce the highest percentage, the difference between it and the institutions directly below it has been decreasing annually. In fact, journal output at UP declined from 2009 to 2010 **(Annexure 13a)**.

71. UP is followed by UCT, UKZN, SU and WITS in the same order as in 2009. In 2008 these five institutions produced 61% of all journal publications, a percentage which dropped to 60.1% in 2009 and 57.2% in 2010. This gradual decline is not an indication of a drop in output at these institutions, but is rather a sign of growth at other institutions. It suggests that others are managing to grow their output at a faster rate and that the gap between these institutions is understandably decreasing (however slightly).

72. However, it is still remarkable that only five institutions produced 57% of all journal publications. ***These institutions are encouraged to collaborate with others so as to assist those who have recently begun to develop their research capability.***

73. The next seven institutions (UNISA, UJ, NWU, UFS, RU, UWC and NNMU) appear in much the same order as in 2009 except that previously UFS followed UNISA as the second largest producer. In 2009 these seven institutions produced 31.9% of journal publications, compared with 33.6% of the journal outputs in 2010. Growth in sector share since 2005 is most positive at UJ, NWU and UWC.

74. The remaining eleven institutions produced 7% of total publications in journals in 2008, 8% in 2009 and 9.2% in 2010. The growth in sector share is a positive development, especially as the rate of growth appears to have increased over the past two years. ***Institutions in this cluster are encouraged not only to collaborate with other institutions in order to grow their quality research further, but also to share best practice among themselves.***

75. The majority of total journal units (58%) were accrued from journals listed on the Thomson Reuters ISI Web of Science Indices (5028.12 units compared to 4711.73 units in 2009 and 4172.96 units in 2008) **(Annexure 14 and 15)**. This reflects an increase of 6.7%, which is a positive development as it exceeds the growth in total journal publications and therefore suggests a growth in world class research. Growth in output in journals listed in the ProQuest IBSS index increased by an even greater percentage (24.9%), although publications in journals listed on the IBSS index still total only 950.85 units (compared with 713.86 units in 2009).

76. Publications in 2010 in journals on the two international lists totalled 5978.97 units or just below 70% of all journal publications. This is an increase from

66% in 2009, 64% in 2008 and 57% in 2007. This increase is partly due to the fact that an increasing number of South African journals are internationally listed, which suggests improvement in the quality of South African journals. The fact that our research is more available internationally as a result, is a positive development.

77. Publications in journals listed on the South African Approved Journals list in 2010 dropped from 2831.02 units in 2009 to 2624.39 units. This is a decrease of 206.63 units or 7.9%. This is a positive development when the size of each index is taken into account. The South African Approved Journal list only covers approximately 250 journals of which a fifth are also listed on the international indices. In comparison, the ISI Web of Science indices include almost 11500 journals and the IBSS just under 3000.

78. Overall, the highest number of journal publications outputs by CESM categories are as in the table below (see also **Annexure 16**). The CESM categories have changed from 2009 to 2010, so comparisons are hard to draw. However, wherever possible these are also reflected in the table below. Where the CESM number has changed, the old number is shown in brackets.

Journal Publications by CESM Categories

1st Order CESM Categories	Subject	% Output by CESM (2009)	% Output by CESM (2010)	Output per Capita
9	Health Care & Health Sciences	16.77%	17.34%	**0.77**
14	Physical Sciences	17.43% (CESM 15)	12.57%	**1.08**
20	Social Sciences	8.45% (CESM 22)	8.3%	**1.07**
13	Life Sciences	n/a	8.22%	**0.67**
12	Law	6.45%	6.91%	**0.92**
17	Philosophy, Religion & Theology	8.02% (CESM 18)	6.86%	**2.64**
1	Agriculture, Agricultural Operations & Related Sciences	8.02%	6.31%	**1.36**
TOTAL			**66.51%**	

79. From 2009 to 2010 there has been little change in the order of output in these main CESM categories. In 2009 the highest output was in CESM 15 (Life and Physical Sciences) with 17.43% of all journal outputs. This CESM has been divided into 14 (Physical Sciences) and 13 (Life Sciences). Together these two CESM categories produced over 20% of all journal output in 2010.

80. Health Care & Health Sciences now has the highest output and the CESM experienced a small increase in the percentage of its output. The percentage of output in Law has grown and Law now features in the top five. Together these seven CESM categories produced almost 67% of all output in journals.

81. Certain CESM categories continue to produce little output. Those contributing less than 1% of all outputs are as follows (figures in brackets are for 2009):

CESM 2: Architecture & the Built Environment: 0.63% (0.87%);

CESM 6: Computer & Information Sciences: 0.96% (0.55%);

CESM 10: Family Ecology and Consumer Sciences: 0.24 (0.21% as Home Economics);

CESM 16: Military Sciences: 0.20 (0.34% as CESM 17).

82. The CESM categories with under 1% of total journal output have not changed much since 2009, except that CESM 5 (Communication, Journalism and Related Studies) has increased from 0.82% to 1.15% and therefore no longer features in this category and CESM 11: Industrial Arts, Trades & Technology (0.17% in 2009) no longer features as a separate CESM.

83. In 2010, journal publications by broad field were **(Annexure 17):**

Science Engineering & Technology: 55.4% (52.8% in 2009);

Humanities: 33.8% (37.7% in 2009);

Business & Commerce: 5.6% (4.8% in 2009); and

Education: 5.2% (4.7% in 2009)

84. In total, Humanities output published in journals has decreased by 4% of total outputs. In real terms, this is a drop from 3113.70 units in 2009 to 2910.78 units in 2010. This is of concern considering the total increase in journal publications.

85. **In summary**, articles published in journals continue to account for the vast majority of outputs across the sector. This is positive as journal articles are generally of high academic standard (with strict peer review processes in place) and are easily accessible across the world. However, publications in other types of publications, especially books, need to increase. A few positive developments are evident. Firstly, growth in output at institutions which do not have an historical research focus, as recognised in 2009, has continued into 2010. Secondly, the number of publications in journals listed on the international indices continues to increase as does the listing of South African journals in international indices. Of concern is the drop in the number of publications in the Humanities.

F. Book Publications

86. Research publications in scholarly books for 2010 amounted to **401.68 units**, an increase of 7% from 376.71 units in 2009 **(Annexure 18)**. From 2008 to 2009 output in books increased by a dramatic 41%. While continuous growth at this level was not expected, it is positive to observe that this growth has been sustained, and even strengthened, by the system as a whole in 2010. In South Africa and internationally there have been studies on the decline in scholarly publishing and it is encouraging to note that despite some stagnation in growth from 2005 to 2008, book publications are once again increasing. ***Despite this growth, book publications as a percentage of all publications remains low and there is still the need to further encourage quality book publications in all fields.***

87. In 2010, 60% of the books submitted to the Department for subsidy purposes were approved by the research outputs evaluation panel **(Annexure 19)**. The approval rate for both books and conference proceedings has been increasing on an annual basis, although the rate for conference proceedings continues to exceed that for books. In 2009 58% of books were approved, compared with 37% in 2007 and 48% in 2008. This improvement is encouraging as it suggests that institutions understand the policy better and that the quality of books submitted is improving.

88. Despite growth in book publications and an improvement in the approval rate, the panel expressed concern at the number of high quality scholarly books not subsidised based on lack of evidence of peer review. This concern is discussed in Section H and will be investigated further by the Department.

89. The three main reasons for the non-recognition of books remained the same as in previous years (**Annexure 20**). The main reason was that they were found not to be scholarly (41%). Included in this section is the submission of introductions or conclusions without substantial scholarship. Scholarship is a difficult area for research officers to assess, ***but institutions are encouraged to ask academics to assist in sifting out work which does not meet the definition of research as per the policy.*** The policy explains that: 'research is understood as original, systematic investigation undertaken in order to gain new knowledge and understanding'. Furthermore, the purpose of the publication must be to disseminate original research and/or new knowledge or developments within specific disciplines, sub-disciplines or fields of study or it must be from a position of demonstrable authority and make significant conceptual or empirical synthesis that advances scholarship. The target audience is normally specialists in the relevant field (not normally undergraduate students).

90. The second most common reason for non-recognition was problems relating to peer review, with peer review process accounting for 19% and insufficient evidence of the peer review process accounting for 7% of the rejected book publications. Peer review process means that the process followed was not according to the panel's requirements, for instance, only proposals were reviewed or review was done by the editor and not by independent specialists. A problem was experienced with institutions only supplying a webpage from the publisher without any details on the peer review process or mention of the actual publication under consideration as evidence of peer review. In total, peer review accounted for 26% of rejected books, an increase since 2009.

91. A large number of books (also 26% but slightly fewer than for peer review) were not recognised based on non-compliance with the policy based on the type of publication. This includes the submission of textbooks, handbooks, theses (without evidence of substantial new research and/ or re-working) or encyclopaedias and other reference books. There were also a few cases where non-accredited journals were submitted and claimed as books. Please note that journals can only be claimed as journals (i.e. accredited journals only and audited claims) and cannot be submitted as either books or conference proceedings.

92. The remaining 7% of non-recognised books were due to missing information – mainly second editions or republished work without evidence of substantial new research. In particular, institutions submitted work that was re-published and not claimed previously, but had not been revised. The policy requires substantial new research and revision and not just evidence that the initial publication was not claimed. ***The panel also experienced some problems where affiliation was unclear or academics were only appointed as visiting fellows from a date post-publication. Claiming for such publications is unethical.***

93. The highest proportion of book units were allocated to UKZN with 68.12 units (and 17% of the total) **(Annexure 18)**. UKZN was followed by UCT (16%), Wits (15%), SU (14%) and UP (6%). These five institutions produced 68% of all books publications compared with 64% in 2009, although the order of institutions has changed since 2009 (UCT, SU, Wits, UKZN, UP). Output in books at UKZN increased by 55% from 2009 to 2010.

94. The next seven institutions (as per table 2) together produced 29% of all book publications and the remaining eleven produced 3%. When comparing these ratios (68:29:3) to those for total outputs (57:34:9) it is clear that a small number of institutions produce a greater share of books than is the case with other publications. This is largely due to the low output in books at UoTs. In fact, there was no output in books at MUT, CUT, VUT or DUT and low output at CPUT (0.95 units) and TUT (0.67 units). This is in line with the focus of the UoTs which is on SET and not the Humanities. **(Annexure 9)**. ***Despite this, quality book publications in SET need to be encouraged.***

95. Output in books per institution fluctuates dramatically from year to year, as can be expected from the nature of a book which takes a long time to complete and publish, and from the high number of units a whole book accrues **(Annexure 18b)**. Year on year increases and decreases are, therefore, not cause for concern. However, negative annualised growth rates since 2005 are evident at both UCT and UP.

96. Regarding 1st order CESM categories, the highest number of units (over 5% of total) for book publications were awarded as follows:

    CESM 20: Social Sciences (39%);

    CESM 12: Law (16%);

    CESM 17: Philosophy, Religion & Theology (15%); and

    CESM 11: Language, Linguistics & Literature (10%).

97. In 2009 the same categories were the highest, although the order and CESM numbers have changed. In 2009 Social Sciences was followed by Philosophy, Religion & Theology, then Language, Linguistics & Literature and then Law. See **Annexure 21** for output by all other CESM categories.

98. The lowest CESM outputs for books (less than 1 unit) were:
    CESM 2: Architecture and Built Environment – 0.85 units
    CESM 3: Visual and Performing Arts – 0 units
    CESM 10: Family Ecology and Consumer Sciences – 0 units
    CESM 15: Mathematics & Statistics – 0 units

99. The panel is concerned about the low output in books in SET.

100. In 2010, book publications by broad field were **(Annexure 22):**
    Humanities: 85% (80% in 2009);
    Science Engineering & Technology: 9% (11% in 2009);
    Education: 4% (6% in 2009); and
    Business & Commerce: 3% (4% in 2009).

101. From these figures it is clear that the Humanities are the field which focuses on books publications. This is also reflected in the acceptance rate for Humanities publications (65%) compared with that for Business and Commerce (51%), SET (41%) and Education (40%) **(Annexure 23)**. When considering individual CESM categories, acceptance rates below 40% were found for the following:
    CESM 1: Agriculture, Agricultural Operations & Related Sciences (24%)
    CESM 2: Architecture and Built Environment (35%)
    CESM 3: Visual and Performing Arts (0% of 9.93 units)
    CESM 5: Communication, Journalism & Related Studies (28%)
    CESM 7: Education (40%)

CESM 15: Mathematics & Statistics (0% of 6.36 units)

102. Concerning Law, where a special panel was convened due to historically low acceptance rates, the rate was still below the average at 47%. Reasons for this are considered in Section H.

103. **In summary**, book publications have increased, which is positive as the high growth from 2008 to 2009 has been sustained. However, the majority of publications continue to be produced at a small number of institutions and many institutions produce no output in books. ***Therefore, there is a need to further stimulate increases in book publications, which also remain low relative to overall sector publications. Furthermore, lack of output in books in SET and Business and Commerce is of concern.***

G. Published Conference Proceedings

104. Research publication outputs published in conference proceedings for 2010 amounted to **742.76 units** and accounted for almost **8% of overall outputs**. (**Annexure 24**).This shows substantial growth since 2009 (56%) when conferences accrued 476.02 units and accounted for 5% of total output. The ratio of output in books, conferences and journals had been fairly constant until this time. The reason for this spike in conference publications needs further consideration, although spikes in growth have been noted previously (last year for books) and these have since stabilised.

105. In 2009, the annualised growth rate for outputs in published conference proceedings since 2005 was 8.4%. However, the high growth rate from 2009 to 2010 pushes the annualised growth rate up to 13.6%. One reason for this high growth rate is the improved acceptance rate for conferences **(Annexure 19)**. In both 2008 and 2009 72% of submitted conference proceedings were accepted for subsidy by the research outputs evaluation panel. In 2010 this

rate has increased to 89%. This means that of 835.05 units submitted, 742.76 were accepted. In 2009, 659.07 units were claimed, meaning that there was an increase of 27% in units claimed.

106. As in previous years, peer review related problems accounted for the largest number of conferences not recognised for subsidy purposes **(Annexure 25)**. In fact, 42% (compared to 63% in 2009) of non-approved conference proceedings submissions were due to peer review related problems including insufficient evidence supplied by institutions and authors, which accounted for 18% and another 24% as a result of the peer review process. Most of those with peer review process problems where due to review of abstracts only (as opposed to full manuscripts) or peer review which was not deemed independent.

107. In 2009 the number of conference proceedings rejected due to non-scholarly content dropped, but has increased again to 31%. The panel observed that some academics are dividing conference papers into small parts (so-called 'salami slicing') in order to try and accrue more units. This has actually led to an increase in non-scholarly papers. Similarly, 2% of papers were rejected as 'duplicate papers' where two or more papers, with very similar content and titles were submitted by the same academic from different conferences. ***These are unethical practices which need to be curbed at institutional level in order to protect the integrity of the institution and the focus needs to be drawn to quality research.***

108. Last year, the problem of in-house publications was observed for the first time. This refers to publications from a conference which was organised by and held at a specific institution, at which a majority of the papers were from academics at the host institution (or another single institution). Some in-house conferences were received, but they were returned prior to the sitting of the panel. However, the panel raised the issue of the quality of some conferences

organised by institutions, even when these were not in-house. ***The panel stressed the need for the audience of a conference to be as broad as possible and for a wide range of papers to be included.*** In some fields, it would be better if one annual conference was organised by a society rather than individual conferences by Departments at each institution.

109. A fairly large number of papers (21%) were not subsidised because they were short papers, work in progress papers or posters. The panel noted that such papers are called as such in the conference proceedings table of contents (i.e. it is not an indication of actual length) and that these are normally papers which do not meet the standard to appear as full research papers. Many do not undergo a full peer review process or are not published with the proceedings. For these reasons, it was agreed that they would not be recognised. ***In future, institutions are urged to sift their submissions and remove all such papers.***

110. A smaller number of conferences were not recognised for other reasons, ranging from previously published papers to avoidable technical reasons. However, the improvement in the rate of approval is largely due to institutions sifting conferences better before submitting to the Department and research officers must be congratulated in this regard.

111. As in 2009, the highest number of approved conference proceedings were from UCT (16%), followed by SU (11%); UP (10%); UJ (10%) and NWU (7%). In 2009 these five included WITS, not NWU (**Annexure 24A & B**).

112. The majority of units for published conference proceedings were in **(Annexure 26)**:

    CESM 8: Engineering (39%);

    CESM 6: Computer & Information Sciences (18%); and

    CESM 4: Business, Economics & Management Studies (15%).

113. Considering that these three CESM categories account for 72% of all conference proceedings, it is clear that the applied sciences, followed by business studies, are the main fields where conference proceedings are an important form of publication.

114. There were some CESM categories in which no units were awarded for conference proceedings. These were CESM 10: Family Ecology and Consumer Sciences, CESM 12: Law (6 units were claimed) and CESM: 18 Psychology (0.5 units were claimed). Law experienced an especially high rejection rate, but most of the papers submitted were from the same conference.

115. In 2010, conference proceedings publications by broad field were **(Annexure 27):**

    Science Engineering & Technology: 71% (77% in 2009);
    Business & Commerce: 15% (12% in 2009);
    Education: 8% (4% in 2009); and
    Humanities: 6% (7% in 2009).

116. The acceptance rate by broad field was **(Annexure 28)**:

    Science Engineering & Technology: 91% (78% in 2009);
    Business & Commerce: 95% (64% in 2009);
    Education: 77% (61% in 2009); and
    Humanities: 75% (51% in 2009).

117. These figures show that approval increased across all fields, although it is still lowest in the Humanities.

118. For the past few years the Department has been compiling a list of annual or biennial conferences attended by academics across various institutions

(Annexure 29). The number of frequently accepted conferences on this list is growing as these conferences show consistent quality. ***Institutions must continue to submit these conferences with evidence of peer review for re-assessment annually by the panel unless told otherwise. However, it is hoped that sharing this list will help both research officers and academics to better understand the policy requirements for quality conferences.***

119. **In summary**, research publication outputs in conference proceedings increased considerably from 2009 to 2010. This was partly due to an increase in submissions but also due to an improved approval rate. The panel noted that UoTs have improved their acceptance rate, suggesting a better understanding of this aspect of the policy. **It appears as if the policy is driving academics towards better quality conferences and that more South African conferences are meeting quality standards.** SET continues to be the main field which publishes quality, peer reviewed proceedings.

H. Key Discussions and Challenges

120. **Integrity of claims:** Institutions are reminded that all claims are submitted under the signature of the VC/ DVC: Research, who confirms that all claims are accurate and justifiable. There are certain aspects that cannot be easily controlled by auditors or the Department, and it is the responsibility of the institution to ensure integrity. Some issues of concern are:
    - The claiming of articles in accredited journals which are not original, peer reviewed research articles, such as creative pieces, conference reports, book reviews etc. The policy states that only original, research articles can be claimed.
    - Authors must be affiliated to the institution at the time of conducting and writing the research. This is especially a problem with academics moving

between institutions or the appointment of visiting academics from other countries.

- **The panel is concerned about the appointment of international or visiting academics who are not legitimately affiliated to the institution which claims the subsidy.**
- 'Salami-slicing' where academics reduce research to the smallest possible unit in order to accrue more publications and more money. The focus must be on quality.
- Self plagiarism, where the same or very similar articles are published in more than one publication. While this may sometimes be the case with conference proceedings, only one claim should be made to the Department. Academics are aware when two pieces of work are very similar and should not submit both.

121. **Non-Recognition of Journal submissions:** Despite the fact that journal claims are audited before submission to the Department, the Directorate verifies these submissions. While the discrepancies between units claimed and awarded are small (and decreasing), it is of concern that errors are still evident despite checks conducted by institutions and auditors. The main reason for the removal of journal units in 2010 was the use of the incorrect South African Approved Journals list (i.e. list for 2011 publications rather than 2010 publications). Furthermore, a few institutions claimed articles in journals which are not listed on any of the approved lists. ***Institutions are reminded that only journals listed on the ISI Web of Science indices (not Master List), IBSS index and Approved South African Journals list are accredited for subsidy purposes.***

122. **Author ratios in Journals**: The Department has noted with concern some of the practices relating to accredited South African journals. When applying for accreditation these journals must prove that an overwhelming majority of contributions to every journal issue are from beyond one academic institution.

The Department has found that some journals fail to comply with this requirement after accreditation and such journals will be removed from the list of South African Approved Journals. ***Institutions are requested to take note of such practices with journals published at their institution and to inform the Department if they come across such practices.***

123. **Supplements and Special Issues to Accredited Journals**: The panel was made aware of a new tendency for accredited journals to publish supplements which are in nature more like books than like journal issues. ***As a result, the panel decided that in such cases these journal issues should be submitted as books.*** A journal supplement should have the same ISSN as the rest of the journal publications and should contain individual journal articles by different authors. In contrast, when a supplement carries an ISBN (or both ISSN and ISBN) and is single authored, it should be submitted as a book.

124. A matter of concern noted by the Department is the issuing of supplements and/ or special issues of a journal without the normal focus on quality. It appears as if the special issue policy for some journals differs from the policy applied to a normal edition. For instance, in some journals the special issue may contain articles mainly coming from one institution. The panel will discuss this issue further and the Department requests that ASSAf investigate the issuing of supplements and special issues by South African journals.

125. **Non-Recognition of Books and Conference Proceedings**: The most common reasons for the non-recognition of submitted outputs are the same across institution and remain consistent over the years. The main reasons are shown in **Annexure 20 & 25**.

126. **Peer Review**: Evidence of the Peer Review process followed prior to publication, or the nature of the peer review process, continue to be the main reasons for the non-recognition of outputs. The reasons for non-recognition

include insufficient evidence of the process, peer review of proposals or abstracts only and non-independent peer review. The panel stressed the importance of ***providing as detailed evidence of peer review as possible***. Peer review must take place in complete manuscripts or papers prior to publication and must be done by specialists in the field who are independent of the publication (i.e. not the editor). Evidence of peer review must be unambiguous and from somebody independent from the claiming author. ***Some of these challenges could be eliminated if institutional research offices could get good cooperation from authors. Authors are encouraged to request evidence of peer review at the time of publication and not to leave this until submission time.***

127. **Peer Review and Scholarly Books**: Over the past few years the Department and panel have noted with concern that a large number of high quality scholarly books have not been recognised based on technical reasons. As such, the Directorate undertook further research into the peer review policy of some of the most prestigious academic publishers (such as Springer, Wiley Blackwell, Oxford University Press and Cambridge University Press). It was found that many of these publishers no longer require full manuscript peer review for all publications. Rather, the process involves blind, independent peer review at proposal stage only. Full manuscript peer review is managed by editors if desired. As such, these publications do not meet the technical policy requirement for subsidy despite high quality. This contradiction needs to be resolved and the Department is doing further investigations.

128. **Scholarliness**: The other main reason for the non-recognition of submissions, especially books, was that the publication was not scholarly, that is, not meant for specialists in the field. The policy specifies that the audience for book publications and published conference proceedings must be specialists in the field. Introductions and conclusions, without original research, are also not subsidised.

129. **Textbooks**: The policy specifies that certain types of publications are not subsidised (such as handbooks, textbooks and theses) and that only accredited journals are subsidised. Appeals for the recognition of textbooks for subsidy purposes have been received by the Department. However, the Department continues to hold the view that textbooks do not qualify as research as per the definition in the policy. ***However, the importance of quality textbooks for teaching is recognised. As such, the Department encourages institutions to find ways of encouraging the production of high quality textbooks to support teaching and learning.***

130. **Republished work** cannot be submitted (even if it has not been claimed before) unless there is ***evidence of substantial reworking and new research***. The same applies to second or later editions and theses which have been converted into books or book chapters.

131. **Incomplete submissions** have decreased considerably in the past few years, although missing information remains a slight problem. ***Institutions are urged not to submit claims if all the supporting documentation cannot be found.***

132. **Law Publications**: A discipline-specific law panel sat on 01 August 2011. As this sub-panel only evaluated law publications, it did not have insight into the nature of publications in other disciplines. Nonetheless, it was significant that the panel's decisions corresponded substantially with the decisions that the main panel had made in the past in respect of law publications. There appears to be no need for a specialist law panel in future. Even though their experience was limited to one accreditation session, panel members commented that:
    - The nature of scholarship in Law is not aligned with the criteria used in the existing policy. The general aim is not to produce scholarly or academic

outputs and the target audiences for law publications are in the main not scholars, but practitioners. The definition of scholarliness/scholarship should recognise that specialists in law include practitioners.

- Research in Law differs from most other disciplines in that it has a distinct applied aspect. This does not necessarily mean that such research contains no analysis.
- While some legal research can be academic and of interest to scholars globally, the general focus is usually on influencing practitioners and judges and the application of law at a national level.
- Legal scholars have not seriously considered the nature and objectives of legal scholarship. It is clear that at present such scholarship does not meet the criteria set for scholarship in other disciplines. The South African Law Deans Association (SALDA) should address this matter. It was recommended that a representative from the Department, together with Prof Midgley, attend the SALDA forum to discuss publications and to report on the law panel.
- When assessing law publications in terms of the current criteria the following ought to be noted:
    1. Most law publications that were assessed could be classified as narrative or descriptive.
    2. Judgments regarding accreditation should not be influenced by the title of a work, but should be based on the nature and substance of the work. A work that is called a 'commentary' or a 'Festschrift' often contains considerable scholarship and intellectual engagement. Similarly, a case study may provide the perspective for intellectual engagement. In each instance the work should be assessed for its scholarship.
    3. The focus should be on whether (a) the work constitutes quality research, (b) there is alignment with the criteria and (c) the nature of the need served and (d) it is a leading work that influences the application of law.

4. The concept of what constitutes quality research and a leading work would need to be defined.
5. Reference works such as LAWSA are problematic. They are intended to be first points of entry for practitioners and scholars and are generally not scholarly and, therefore, were not recognised by the panel.

133. **Institutional subsidy to academics**: The Department has become aware that some institutions pay excessive monetary awards to academics based on research production. ***While it remains the prerogative of each institution to develop its own policy for the use of research output and development funds, the Department urges institutions to consider the possible long-term negative consequences of such a policy.***

134. **No Appeals:** While the Department does not provide feedback on individual claims to institutions, it is sometimes possible for institutions to determine which publications were accepted for subsidy purposes and which were not. This is especially the case in CESM categories with a small number of claims or at institutions where there are few claims. In such cases, the Department follows a 'no appeals allowed' policy and ***institutions are urged not to encourage academics to contact the Department directly. Any problems in this regard must be resolved at institutional level.*** Most institutions follow a policy that what they deemed worthy of submission will be subsidised no matter what the outcome at Departmental level.

I. Development Meetings and Support to Higher Education Institutions

135. The purpose of institutional visits or workshops, which the Directorate conducts to targeted institutions or by invitation, is mainly to strengthen the work of institutional Research Offices pertaining to the compilation of their research output submissions to the Department. The objective is to improve

the technical quality of the submissions and to ensure that everybody involved (from the academic to the research officer) is aware of the requirements.

136. **Mini Workshop (10 & 11 February)**: The Directorate felt that a few institutions would benefit from a 'refreshers' workshop in the requirements for submitting to the Department, and it was felt that it would be more effective to host a mini-workshop than to visit all the institutions. The Directorate invited UL (who requested assistance due to staff changes), NWU (who had staff changes in 2010), WSU, UV, UZ and DUT (all of whom needed some support). All institutions confirmed attendance, but WSU and UZ only stayed for the first day and DUT cancelled. Those that attended the workshop found it useful, although some problems with their submissions continue. The workshop began with a general outline of the Policy, before moving onto different sessions dealing with each journals, books and conference proceedings. Each session included practical elements and time for discussion and questions. Dr Simpson, Ms Luruli and Ms Dube presented sessions and, together with Mr Ntuli, provided assistance.

137. **Visits by Invitation:** In the past cycle the Directorate responded to the following requests for visits:

    a. Tshwane University of Technology (20 January 2011)

       The Directorate was requested to make a presentation at The Faculty of the Arts: Research & Innovation Workshop. The presentation focused on the policy requirements, but also touched on the developments relating to the recognition of the Creative and Performing Arts. Questions revolved around TUT's research performance and requirements for peer review and book publications were interrogated in an attempt to ensure compliance with the policy.

    b. University of Stellenbosch (20 & 21 April 2011)

SU requested Departmental representation on its Human Sciences Book Evaluation Committee meeting on 21 April 2010. Dr Simpson and Mr Ntuli visited the Research Office on 20 April and assisted with specific questions prepared by those in the office. On 21 April Dr Simpson and Mr Ntuli joined the committee which mainly consisted of heads of Departments in the Humanities. Separate panels for other Faculties had already been held. The aim was to review all book submissions in order to determine which should be sent to the Department for evaluation. The participation of the Departmental officials was in order to clarify policy and assist the University to ensure that the necessary supporting documents accompanied all submissions.

c. University of South Africa (23 May 2011)

UNISA requested that the Directorate meet with the research office and UNISA Press to discuss published conference proceedings. The Press has been approached to publish conference proceedings and wanted to be sure of the policy requirements. Dr Simpson and Ms Mantolo attended and gave an overview of the requirements. Prof Maluleke joined the meeting and the discussion extended beyond conferences to consider scholarly publishing and good practice.

d. University of Pretoria (08 July 2011)

The Department of Education Management and Policy Studies of the Education Faculty requested input at their Strategic Planning Conference. Dr Simpson attended the session and gave a presentation on the policy requirements, level of subsidy and submission process for each journals, books and conference proceedings. Possible policy changes were discussed. The University's performance over the past few years was presented and special attention was paid to the field of Education.

138. **Participation in DHET Capturing & Checking:** The Directorate piloted a new support strategy in this research cycle. Every year, after receiving submissions from the Universities, the Directorate works through and checks all submissions in order to prepare them for the assessment panel. It was thought that participating in this process could assist research offices in improving their submissions. Three institutions participated in this process (NWU, UP and Wits). The initiative proved successful and will continue.

139. **Communiqués**: The Directorate continued with the process begun in 2009 of sending Communiqués to Research Offices. The purpose is to facilitate communication between the Directorate and the Research Offices throughout the cycle. The Directorate uses this medium to communicate important matters which are meant to support development and capacitate institutional Research Offices. Communiqués are sent electronically and each has a specific focus or theme.

140. **Meetings with external organisations**: During the year the Department met with various external bodies in order to learn from these bodies or share information. Some of these exchanges relate to investigations into possible improvements to the policy.

    a. **CREST/ DHET Workshop on Journal Indices:** As part of the process of considering improvements to the Policy the Directorate undertook research into other indices which could be accredited. After conducting this preliminary investigation, the Directorate contacted the Centre for Research on Evaluation, Science and Technology (CREST) at Stellenbosch University for their input. As a result, CREST hosted a workshop on journal indices on 18 August 2010. The presentations by the DHET and CREST indicated that both had been considering the same journal indices and many findings overlapped.
    b. **Thomson Reuters/ ISI (29 March 2011):** During their visit to South Africa, representatives from Thomson Reuters met with Dr Simpson,

Ms Luruli and Ms Dube to discuss problems related to the use of ISI indices. At the meeting problems experienced with accessing lists in the correct format were discussed as were some queries regarding applying for inclusion on the Web of Science Indices.

c. **ProQuest IBSS (29 March 2011, London):** Late last year the administration of the International Bibliography of Social Sciences (IBSS) was taken over by ProQuest. During a trip to the UK, Mr Mabizela met with ProQuest IBSS to find out what effect the new administration would have on the functioning of the list and whether this would affect our use of it. Some problems regarding listing and removal of journals from the index experienced over the past few years were also discussed.

d. **Meeting with HEFCE (1 April 2011, London):** The panel suggested that the Directorate investigate the research evaluation systems used by other countries. Therefore, Mr Mabizela used the opportunity of his visit to the UK to meet with the Higher Education Funding Council for England (HEFCE), the body responsible for much of the teaching and research funding in the country. The discussion revolved around the way the Research Assessment Exercise (RAE) works as well as the new Research Excellence Framework (REF).

e. **DVC Research Meeting (WSU, 16 May 2011)**: Mr Mabizela attended the DVC Research Meeting at WSU, where he presented on the Policy. He discussed the most important proposed improvements to the policy and the process going forward.

f. **InfoEd and RIMS:** Throughout the cycle various meetings were held with InfoEd/ Rims or with the institutions using this data programme.

J. Policy Improvements

141. The Department has been engaged in extensive research and consultation on the proposed improvements to the existing *Policy and Procedures for*

Measurement of Research Output of Public Higher Education Institutions. After further consultation, the following improvements will take effect:

i. Journals

The Department is aware of problems with the inclusion of journals on the international indices. In particular, some fields find that their top journals are not listed. The criteria for journal listing (and removal) are not always clear. The following additional journal indices have been identified for accreditation: Scopus, the Norwegian list and SciELO South Africa.

ii. Books

Over the last few years the Department has been concerned about the low number of scholarly books and the small growth rates in this important type of publication. While the latest data suggests that book publications are still recognised as important in the sector, the need for incentives to increase publications remains. The cyclic nature of book publications should be remembered, with a book taking a longer period to produce than other types of outputs. The Department plans to increase the number of units allocated to book publications.

iii. Proceedings

The Directorate is considering ways to improve the efficiency of the system; recognise internationally acknowledged good quality proceedings; and take into account those fields that use proceedings as the main medium of research publication. For this reason, the Department has developed a list of Approved Conferences, which has been distributed to research offices. Further indices are being considered.

K. Research Development Grants

142. Changes in RDG allocation will be communicated through the Ministerial Statement on Funding of Universities. This will include changes in research output targets or norms.

L. Overall Observations, Conclusions and Recommendations

143. The quality of submissions from almost all institutions has improved in the past few years. Institutions are encouraged to follow the process and procedure stipulated in the Policy in order to improve the quality of their submissions and to consult communiqués to focus on problem areas. Furthermore, institutions are welcome to contact the Directorate at any time with queries. It is better that problems are resolved before submissions are sent to the Department.

144. The continued growth in total research outputs is a positive development. In 2007 there was a drop in units and it was thought that this pattern might be replicated (increase one year and decrease the following). However, there has now been continual growth since 2007 and substantial growth since 2005. There are, however, some institutions where growth has stagnated and the Department will engage with these institutions.

145. It appears as if the Policy and the incentives it provides are having an effect on the way in which Universities interpret their mission. All Universities are expected to engage in quality teaching, quality research and community service, but for many institutions the focus was always on teaching. However, the Policy seems to have impacted on the interpretation of the mission of Universities and most are now engaging in both teaching and research. It is not expected that all institutions will focus on both teaching and research equally, but that individual missions will determine the extent of individual

priorities. ***It is important that institutions do not allow for research to be developed at the expense of quality teaching and that institutions focus on quality.***

146. It is encouraging that growth is in all types of outputs (journals, books and conference proceedings) and at all types of institutions (Universities, Comprehensive Universities and UoTs). In fact, it is particularly encouraging to see high levels of growth at UoTs and at institutions which have not focused on research previously. Furthermore, the Department was pleased to note that many institutions managed to sustain growth from 2009. The very growth in conference output will need further attention if the pattern continues.

147. Despite these positive developments, the Department has suggested some improvements to the Policy.

148. Approval rates (i.e. the number of book and proceedings publications approved by the panel compared to the number of publications submitted per institution) have improved over the past few years, signalling a better understanding of the Policy at most institutions and higher quality submissions***. However, the Department is concerned at reports that some institutions are using approval rates as a measurement for success. Institutions must focus on a growth in quality output and not on approval rates. Where unsure, institutions must submit claims to the Department.***

149. The majority of research across all institutions is in the field Science, Engineering and Technology (SET).

150. Institutions are encouraged to develop and empower the research office and its staff. The Department has noted a clear correlation between the quality of research submissions and experienced research staff. The cost of

these staff should be considered against the cost of loosing units. Academics should also be encouraged to work with these staff and not to dismiss them as administrators. ***Institutions must develop and implement Research Policies which indicate areas of growth potential as well as strategies for growth and development.***

ANNEXURES

ANNEXURE 1: RESEARCH OUTPUT UNITS, 2010

Institution	Book Publications	Percent of Institution's Total	Conference Proceedings	Percent of Institution's Total	Journal Publications	Percent of Institution's Total	Total	Percent of Overall Total
UCT	**65.00**	5.2	**116.33**	9.3	**1071.7**	85.5	**1253.03**	**12.9**
UP	**23.63**	2.0	**75.9**	6.4	**1087.93**	91.6	**1187.46**	**12.2**
UKZN	**68.12**	5.9	**47.91**	4.2	**1030.48**	89.9	**1146.51**	**11.8**
US	**54.88**	5.3	**84.97**	8.2	**894.85**	86.5	**1034.70**	**10.6**
WITS	**62.17**	6.6	**40.14**	4.3	**833.83**	89.1	**936.14**	**9.6**
UNISA	**15.85**	2.2	**37.92**	5.2	**680.83**	92.7	**734.60**	**7.5**
UJ	**22.61**	3.7	**72.54**	11.9	**515.75**	84.4	**610.90**	**6.3**
NW	**22.09**	3.8	**53.09**	9.1	**510.76**	87.2	**585.94**	**6.0**
UFS	**13.83**	2.8	**31.25**	6.3	**451.41**	90.9	**496.49**	**5.1**
RU	**9.56**	2.9	**23.39**	7.2	**292.38**	89.9	**325.33**	**3.3**
UWC	**21.54**	8.1	**4.75**	1.8	**240.53**	90.1	**266.82**	**2.7**
NMMU	**8.98**	3.5	**45.61**	17.9	**200.92**	78.6	**255.51**	**2.6**
TUT	**0.67**	0.4	**40.65**	21.6	**146.74**	78.0	**188.06**	**1.9**
CPUT	**0.95**	0.6	**24.47**	15.8	**129.84**	83.6	**155.26**	**1.6**
UFH	**4.33**	3.0	**5.25**	3.7	**132.64**	93.3	**142.22**	**1.5**
UL	**0.00**	0.0	**4.18**	4.5	**89.07**	95.5	**93.25**	**1.0**
UV	**6.72**	8.8	**4.85**	6.3	**65.19**	84.9	**76.76**	**0.8**
UZ	**0.47**	0.7	**1.5**	2.3	**64.69**	97.0	**66.66**	**0.7**
WSU	**0.28**	0.5	**4.67**	9.0	**46.9**	90.5	**51.85**	**0.5**
DUT	**0.00**	0.0	**6.75**	13.9	**41.7**	86.1	**48.45**	**0.5**
VUT	**0.00**	0.0	**8.25**	18.4	**36.48**	81.6	**44.73**	**0.5**
CUT	**0.00**	0.0	**7.85**	19.8	**31.71**	80.2	**39.56**	**0.4**
MUT	**0.00**	0.0	**0.54**	7.1	**7.03**	92.9	**7.57**	**0.1**
GRAND TOTAL	**401.68**	**4.1**	**742.76**	**7.6**	**8603.36**	**88.3**	**9747.80**	**100.0**

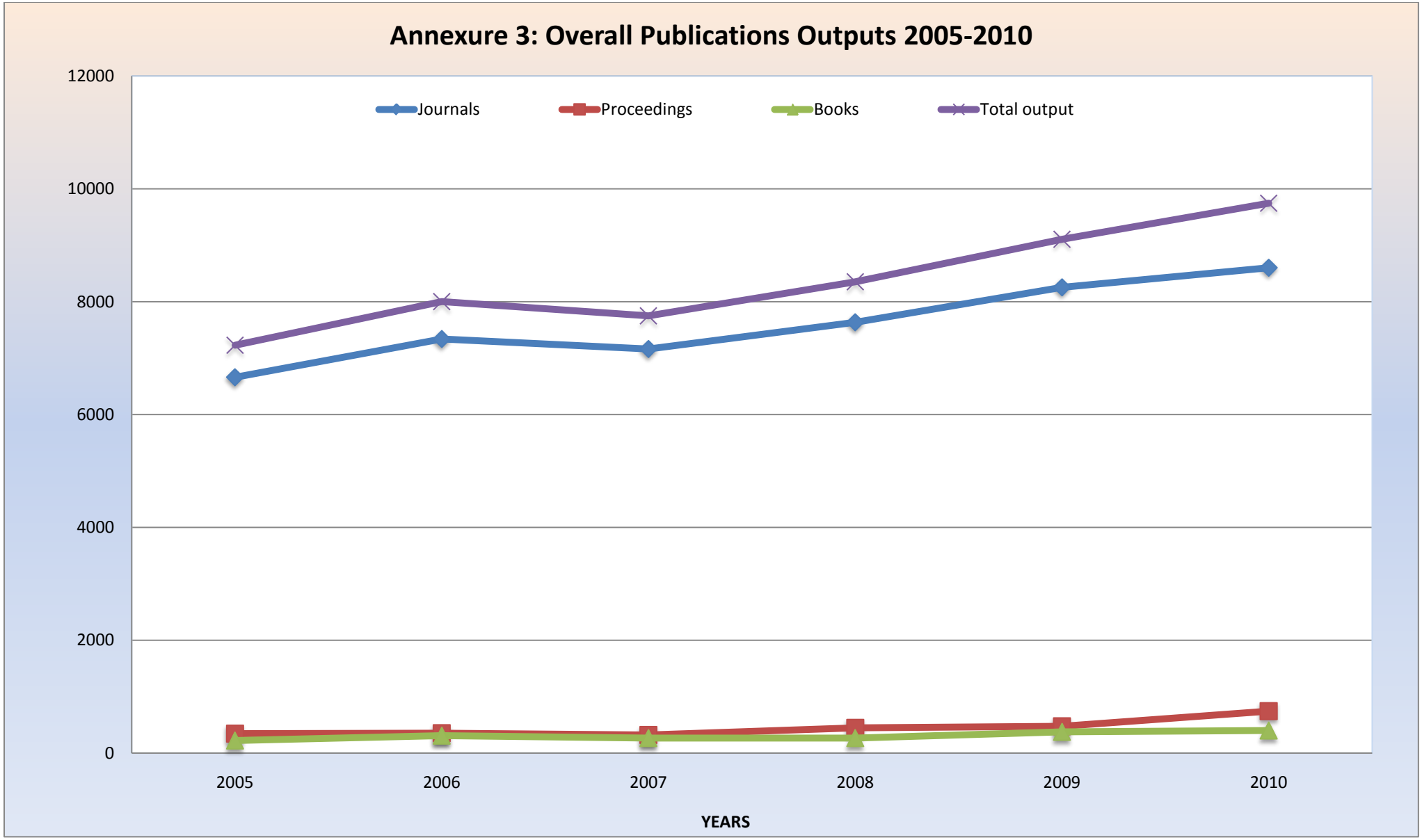
ANNEXURE 2: INCREASE/ DECREASE IN OUTPUT UNITS 2005-2010

	Proceedings						Journals					
Institution	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
UFH	1.5	0.66	3	8	3.88	**5.25**	51.24	63.34	62.5	78.45	123.88	**132.64**
UV	0	1	0	1	2.33	**4.85**	26.9	18.69	17.51	32.61	54.35	**65.19**
VUT	2	4.26	1.5	2	5.1	**8.25**	15.14	16.42	16	17.34	31.4	**36.48**
DUT	3.25	3	3.83	2.75	3.25	**6.75**	20.18	31	31.5	23.45	46.32	**41.7**
CPUT	16.77	16.72	6.63	17.88	23.83	**24.47**	51.9	47.1	42.1	61.68	101.81	**129.84**
UZ	0	5.48	1.55	0	3.75	**1.5**	44.27	53.91	44.98	64.68	69.78	**64.69**
UWC	0.5	0.25	4.75	8.14	3.75	**4.75**	159.1	178.3	211	214.28	248.15	**240.53**
UJ	13.64	15.99	15.97	27.65	42.05	**72.54**	300.8	360.77	330.64	354.99	412.64	**515.75**
TUT	17.61	22.9	20.94	26.13	21.52	**40.65**	69.9	82	80.5	111.08	100.74	**146.74**
RU	14.98	15.7	11	33.22	24.07	**23.39**	232.6	248.52	258.68	287.82	302.64	**292.38**
NW	7.58	7.8	8.79	18.25	23.04	**53.09**	318.38	351.5	358.21	471.33	411.81	**510.76**
MUT	1.58	1.5	0	0.17	0	**0.54**	1.5	5	1.41	1.41	3.83	**7.03**
UCT	61.75	69.34	49.36	74.47	93.53	**116.33**	754.7	792.9	914.7	958.59	1038.06	**1071.7**
CUT	1.6	0.5	0	0.5	1.67	**7.85**	25.23	37.21	28.3	23.9	33.04	**31.71**
US	22.74	28.09	39.11	44.19	50.47	**84.97**	789.39	895.91	828.74	879.56	947.21	**894.85**
UFS	6.93	11.32	15.75	23.17	17.53	**31.25**	396.37	453.2	451.84	396.13	469.66	**451.41**
WITS	31.3	38.4	36.13	23.67	42.2	**40.14**	712.2	758.4	807.02	767.75	827.29	**833.83**
UNISA	10.94	10.68	18.83	20.41	19.63	**37.92**	502.25	564.7	521.75	613.71	593.26	**680.83**
UKZN	37.47	32.02	24.99	35.58	30.2	**47.91**	859.3	977.8	793.5	917.36	1033.93	**1030.48**
UP	69.34	52.14	43.3	58.87	36.38	**75.9**	1007.54	1102.02	1084.11	1109.29	1116.29	**1087.93**
NMMU	23.3	13.82	14.33	21.21	27.34	**45.61**	183.72	172.2	165.04	156.44	195.89	**200.92**
WSU	0	0	1.83	1	0.5	**4.67**	33.32	22.23	15.85	12.8	20.86	**46.9**
UL	0	0	0	0.5	0	**4.18**	105.97	107.01	97.37	83.52	73.77	**89.07**
TOTAL	**344.78**	**351.57**	**321.59**	**448.76**	**476.02**	**742.76**	**6661.9**	**7340.13**	**7163.25**	**7638.17**	**8256.61**	**8603.36**

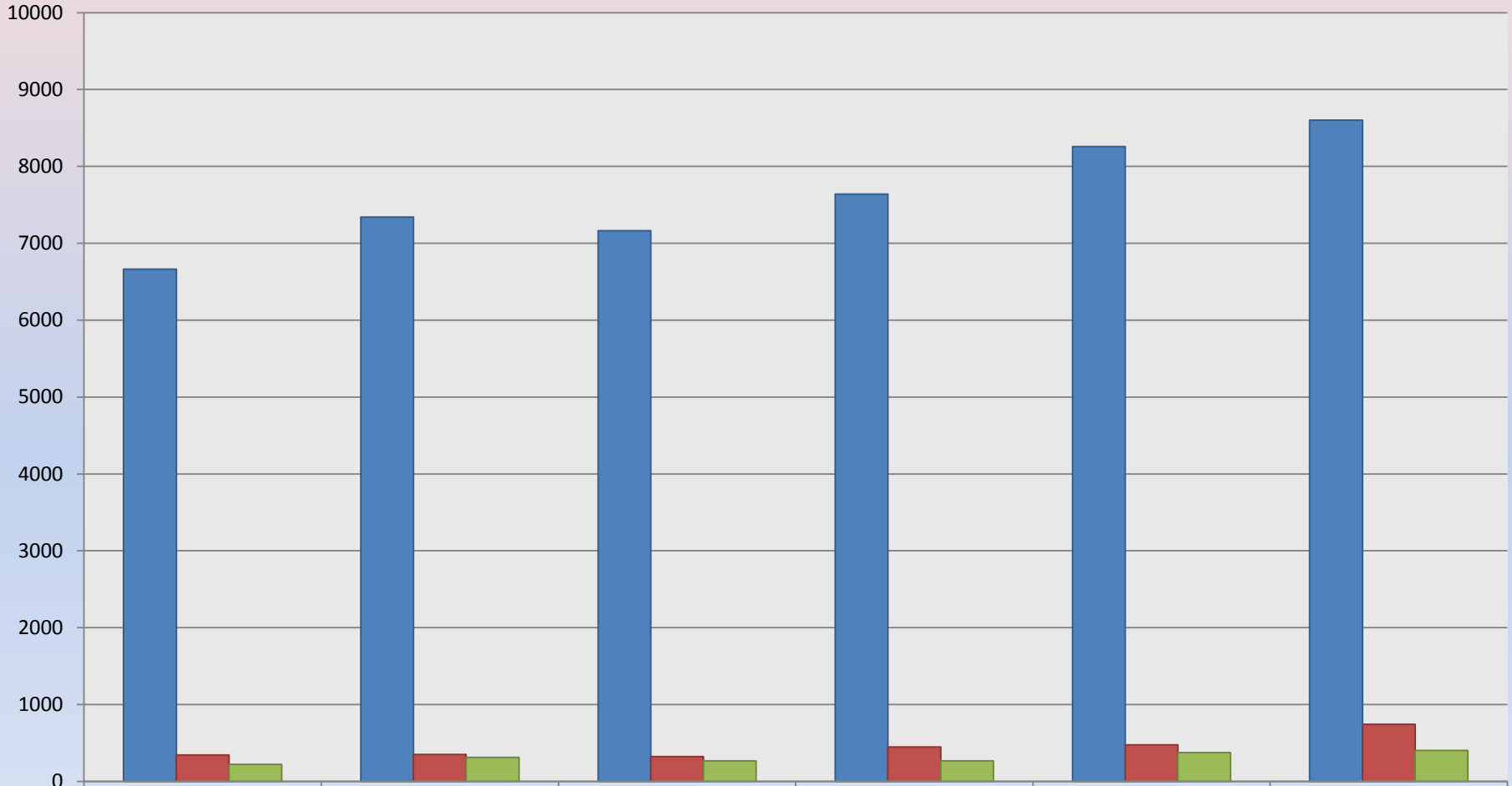
ANNEXURE 2 (cont): INCREASE/ DECREASE IN OUTPUT UNITS 2005-2010

	Books						TOTAL							
Institution	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**% Growth 2009-10**	**% Annual Growth Rate 05-10**
UFH	0.18	7.78	7.14	0.3	8.84	**4.33**	52.92	71.78	72.64	86.75	136.6	**142.22**	4.11	**17.91%**
UV	0	0.14	0	0.55	1.69	**6.72**	26.9	19.83	17.51	34.16	58.37	**76.76**	31.51	**19.10%**
VUT	0	0	0	0	0	**0.00**	17.14	20.68	17.5	19.34	36.5	**44.73**	22.55	**17.34%**
DUT	0	1.05	0	0	0	**0.00**	23.43	35.05	35.33	26.2	49.57	**48.45**	-2.26	**12.87%**
CPUT	0	0	0	0.58	1.3	**0.95**	68.67	63.82	48.73	80.14	126.94	**155.26**	22.31	**14.56%**
UZ	0	0.33	0.12	0.47	0.82	**0.47**	44.27	59.72	46.65	65.15	74.35	**66.66**	-10.34	**7.06%**
UWC	6.41	23.86	1.02	17.53	26.19	**21.54**	166.01	202.41	216.77	239.95	278.09	**266.82**	-4.05	**8.23%**
UJ	11.55	9.8	4.12	6.38	12.13	**22.61**	325.99	386.56	350.73	389.02	466.82	**610.90**	30.86	**11.04%**
TUT	0	1.51	1.18	5	1.39	**0.67**	87.51	106.41	102.62	142.21	123.65	**188.06**	52.09	**13.60%**
RU	5.2	27.9	4.7	8.98	24.28	**9.56**	252.78	292.12	274.38	330.02	350.99	**325.33**	-7.31	**4.30%**
NW	0.23	1.55	9.2	12.93	13.54	**22.09**	326.19	360.85	376.2	502.51	448.39	**585.94**	30.68	**10.25%**
MUT	0	0	0	0	0.28	**0.00**	3.08	6.5	1.41	1.58	4.11	**7.57**	84.18	**16.17%**
UCT	76.3	44.87	53.14	53.09	56.63	**65.00**	892.75	907.11	1017.2	1086.15	1188.22	**1253.03**	5.45	**5.81%**
CUT	0	0	0	0	0.55	**0.00**	26.83	37.71	28.3	24.4	35.26	**39.56**	12.20	**6.69%**
US	14	9.93	12.15	24.67	53.79	**54.88**	826.13	933.93	880	948.42	1051.47	**1034.70**	-1.59	**3.82%**
UFS	7.68	1.95	5.36	21.83	25.53	**13.83**	410.98	466.47	472.95	441.13	512.72	**496.49**	-3.17	**3.20%**
WITS	17.08	46.47	67.16	49.25	52.18	**62.17**	760.58	843.27	910.31	840.67	921.67	**936.14**	1.57	**3.52%**
UNISA	6.66	10.36	13.26	18.26	12.81	**15.85**	519.85	585.74	553.84	652.38	625.7	**734.60**	17.40	**5.93%**
UKZN	51.87	73.89	57.99	24.51	44.07	**68.12**	948.64	1083.71	876.48	977.45	1108.2	**1146.51**	3.46	**3.21%**
UP	23.9	47.74	28.42	15.76	34.86	**23.63**	1100.78	1201.9	1155.83	1183.92	1187.53	**1187.46**	-0.01	**1.27%**
NMMU	2.26	1.71	0.33	5.99	1.68	**8.98**	209.28	187.73	179.7	183.64	224.91	**255.51**	13.61	**3.38%**
WSU	0	0.2	0.83	0.35	4.15	**0.28**	33.32	22.43	18.51	14.15	25.51	**51.85**	103.25	**7.65%**
UL	0	0	0	0	0	**0.00**	105.97	107.01	97.37	84.02	73.77	**93.25**	26.41	**-2.11%**
TOTAL	**223.32**	**311.04**	**266.12**	**266.43**	**376.71**	**401.68**	**7230**	**8002.74**	**7750.96**	**8353.36**	**9109.34**	**9747.80**	**7.01**	**5.11%**

Annexure 3: Overall Publications Outputs 2005-2010

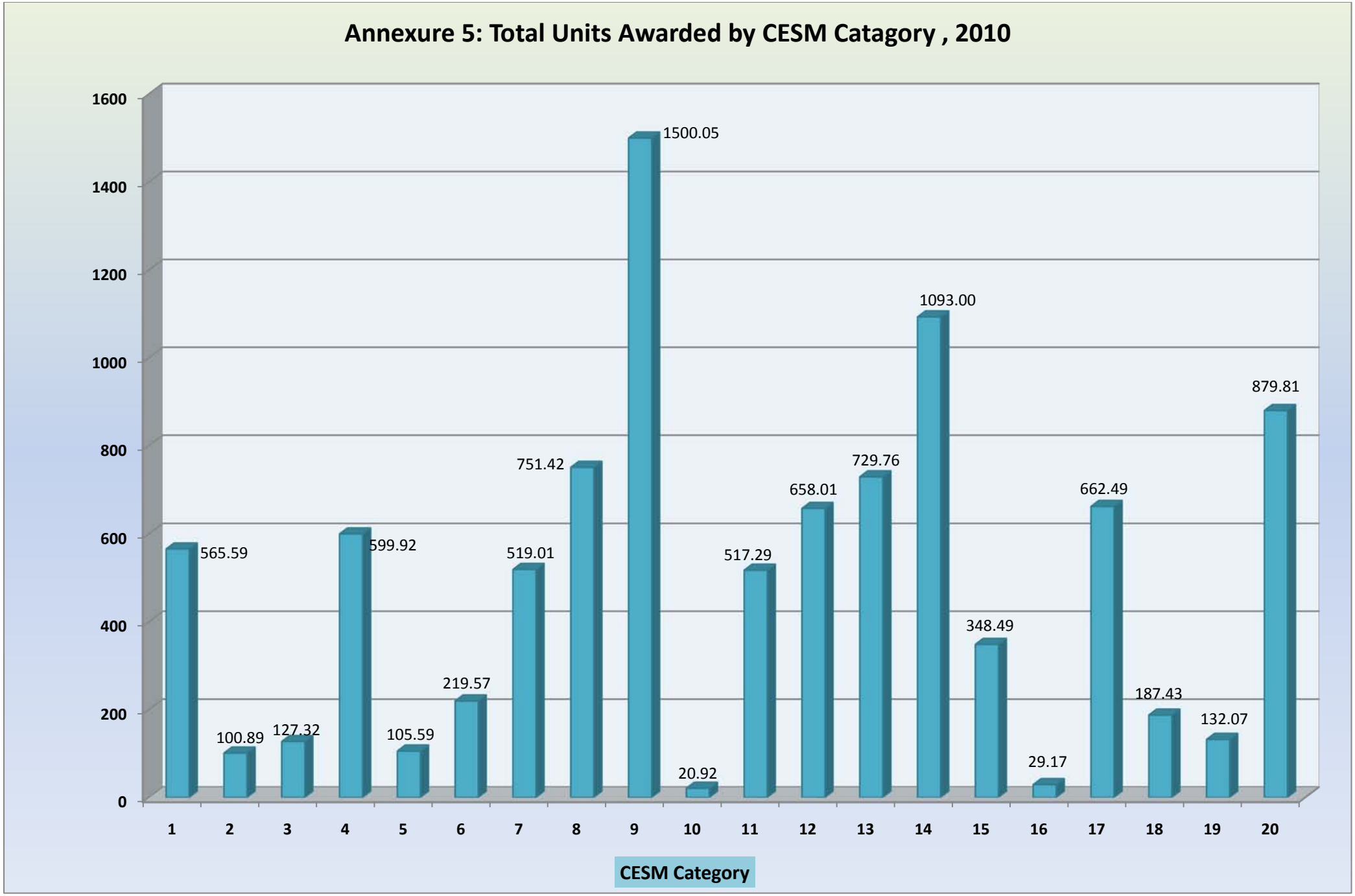


Annexure 4: Total Output by Publication Type 2005-2010



	2005	2006	2007	2008	2009	2010
Journals	6661.90	7340.13	7163.25	7638.17	8256.61	8603.36
Proceedings	344.78	351.57	321.59	448.76	476.02	742.76
Books	223.32	311.04	266.12	266.43	376.71	401.68

Annexure 5: Total Units Awarded by CESM Catagory , 2010

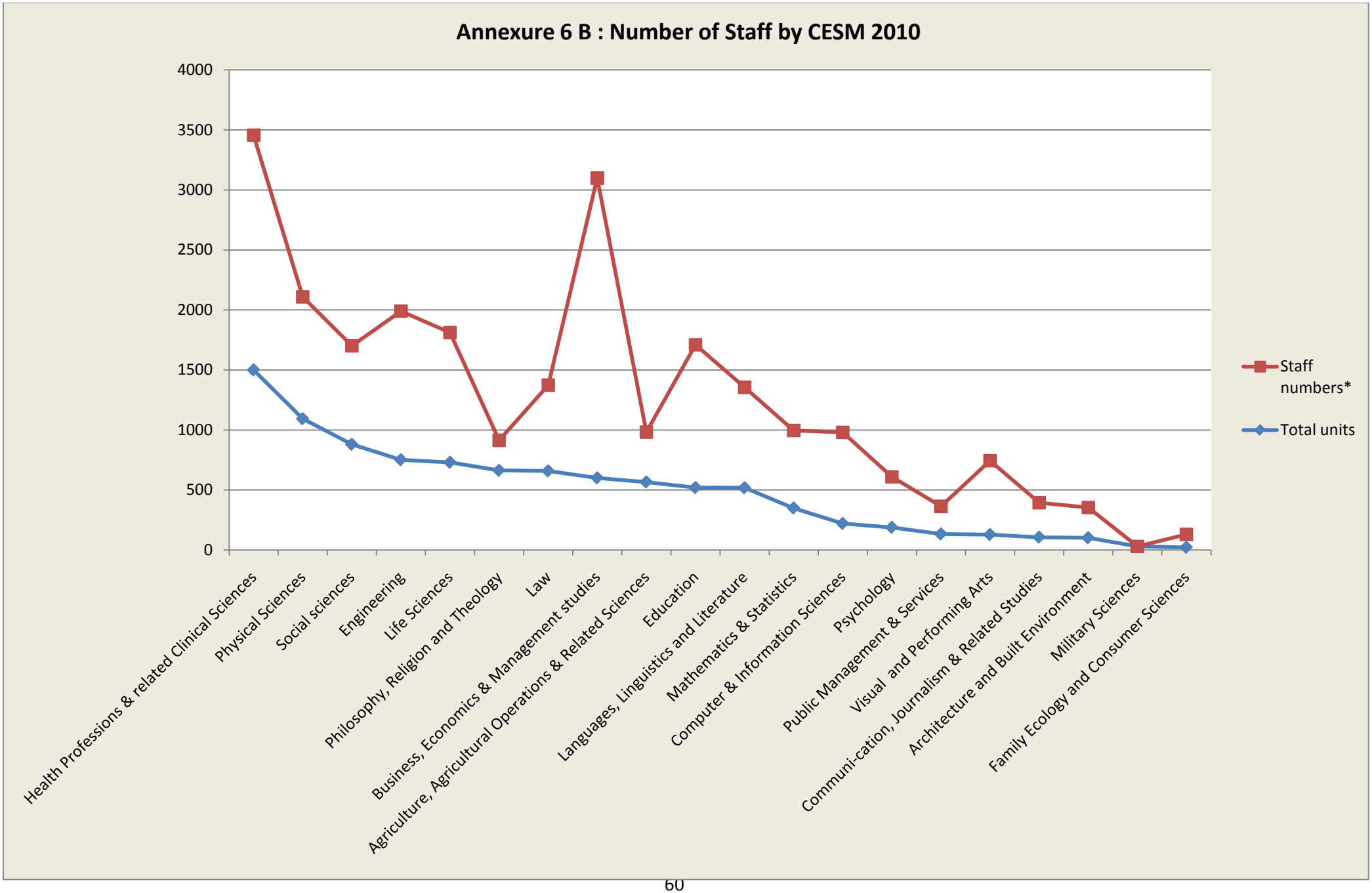


Annexure 6 A: Output by CESM per Staff member , 2010

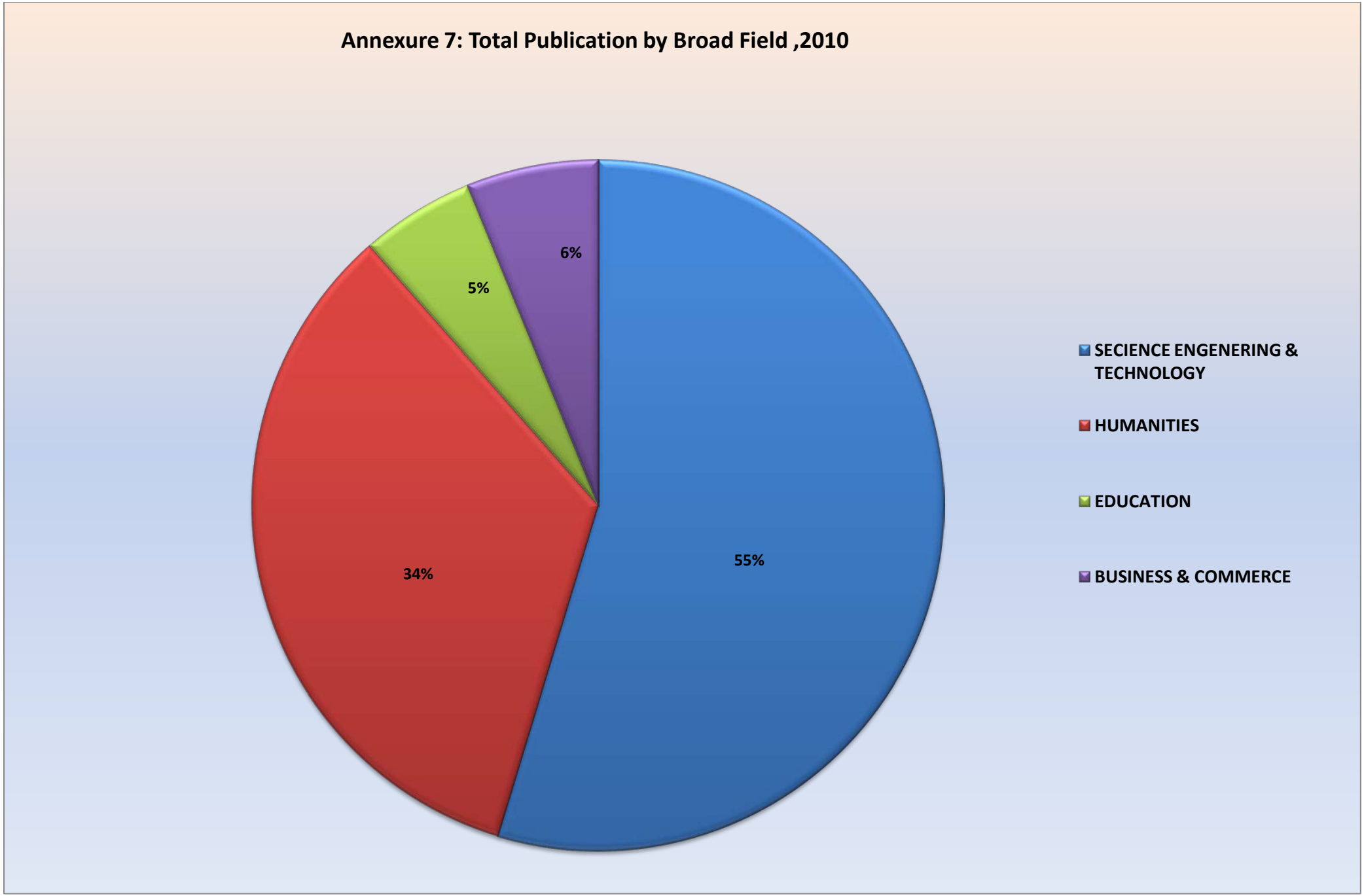
CESM	FIELD	Staff numbers*	Total units	Output per staff member
9	Health Professions & related Clinical Sciences	1956	1500.05	0.77
14	Physical Sciences	1016	1093	1.08
20	Social sciences	821	879.81	1.07
8	Engineering	1238	751.42	0.61
13	Life Sciences	1082	729.76	0.67
17	Philosophy, Religion and Theology	251	662.49	2.64
12	Law	716	658.01	0.92
4	Business, Economics & Management studies	2499	599.92	0.24
1	Agriculture, Agricultural Operations & Related Sciences	416	565.59	1.36
7	Education	1191	519.01	0.44
11	Languages, Linguistics and Literature	838	517.29	0.62
15	Mathematics & Statistics	647	348.49	0.54
6	Computer & Information Sciences	761	219.57	0.29
18	Psychology	421	187.43	0.45
19	Public Management & Services	231	132.07	0.57
3	Visual and Performing Arts	616	127.32	0.21
5	Communi-cation, Journalism & Related Studies	288	105.59	0.37
2	Architecture and Built Environment	252	100.89	0.40
16	Military Sciences	1	29.17	0.00
10	Family Ecology and Consumer Sciences	109	20.92	0.19
Total Units			**9747.8**	

* It must be noted that staff numbers differ to those used when calculating output per capita as not all staff are permanent. Furthermore, some staff are shared between CESMs. **It should also be remembered that some staff may do research in a CESM other than that where they are appointed.**

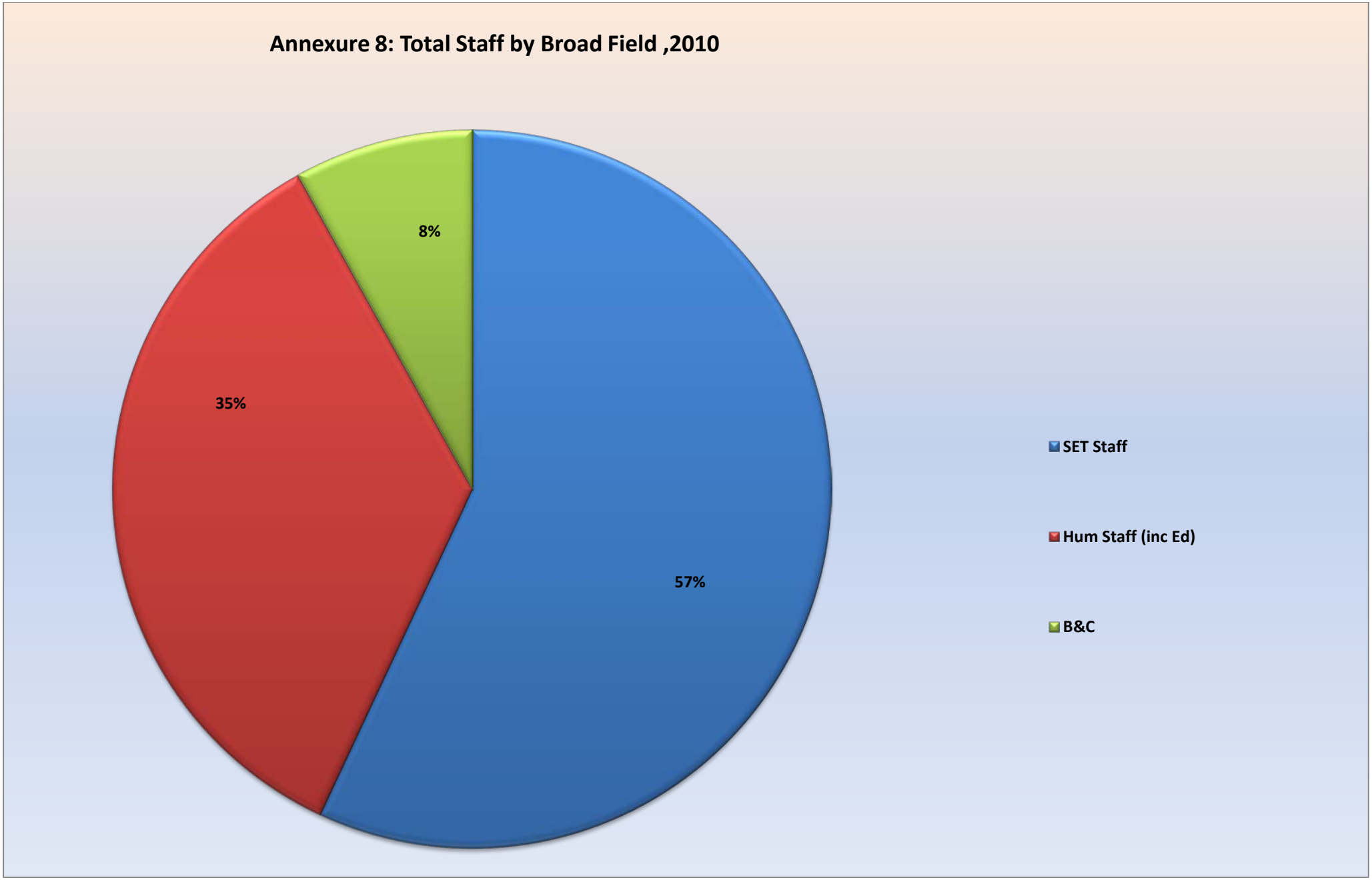
Annexure 6 B : Number of Staff by CESM 2010



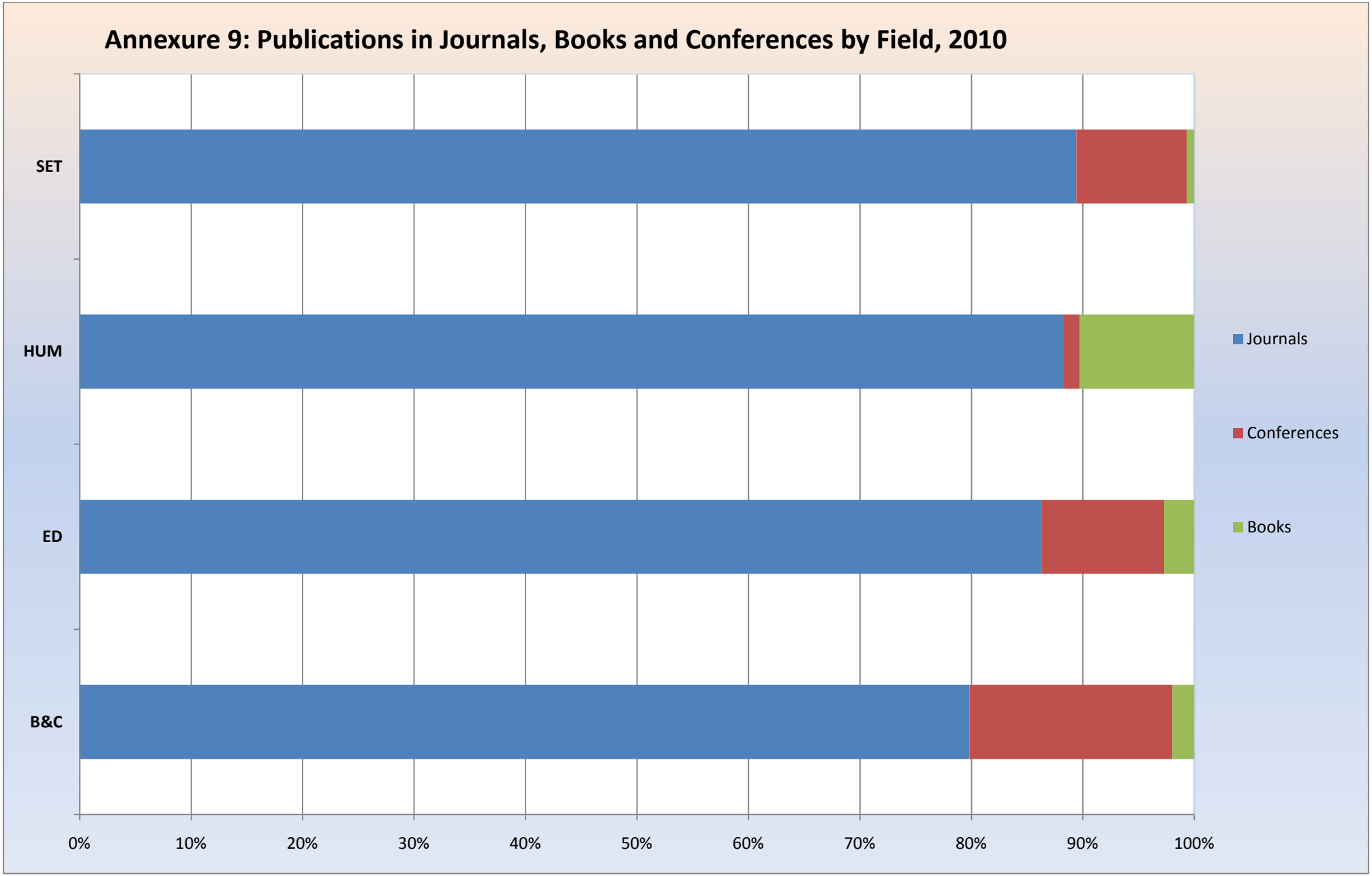
Annexure 7: Total Publication by Broad Field ,2010



Annexure 8: Total Staff by Broad Field ,2010



Annexure 9: Publications in Journals, Books and Conferences by Field, 2010



ANNEXURE 10: PUBLICATIONS OUTPUT PER CAPITA, 2009-2010

	RESEARCH OUTPUT 2009			RESEARCH OUTPUT 2010			Growth in Per Capita output 09-10	Growth in Per Capita output 06-10
Institution	Headcount of permanent staff	Research Publication Units Accrued	Per Capita Output	Headcount of permanent staff	Research Publication Units Accrued	Per Capita Output		
UCT	965	1 188.22	**1.23**	982	1 253.03	**1.28**	3.63	19.71
US	873	1 051.47	**1.20**	917	1 034.70	**1.13**	-6.32	-7.01
RU	322	350.99	**1.09**	321	325.33	**1.01**	-7.02	9.63
WITS	979	921.67	**0.94**	997	936.14	**0.94**	-0.26	40.74
UKZN	1 452	1 108.20	**0.76**	1 403	1 146.51	**0.82**	7.07	19.37
UP	1 635	1 187.53	**0.73**	1 691	1 187.46	**0.70**	-3.32	-8.04
UFS	779	512.72	**0.66**	795	496.49	**0.62**	-5.11	-11.77
NWU	996	448.39	**0.45**	1 086	585.94	**0.54**	19.85	35.31
UWC	524	278.09	**0.53**	509	266.82	**0.52**	-1.23	12.18
UFH	347	136.60	**0.39**	292	142.22	**0.49**	23.72	77.10
UZ	246	74.35	**0.30**	253	66.66	**0.26**	-12.82	-0.29
UV	302	58.37	**0.19**	321	76.76	**0.24**	23.72	229.21
UL	746	73.77	**0.10**	770	93.25	**0.12**	22.47	-9.69
TOTAL UNIVERSITIES	**10 166**	**7 390.37**	**0.73**	**10 337**	**7 611.31**	**0.74**	**1.29**	11.09
UJ	856	466.82	**0.55**	884	610.90	**0.69**	26.72	75.55
UNISA	1 391	625.70	**0.45**	1 404	734.60	**0.52**	16.32	17.82
NMMU	569	224.91	**0.40**	574	255.51	**0.45**	12.62	21.88
WSU	576	25.51	**0.04**	608	51.85	**0.09**	92.56	98.09
TOTAL COMPREHENSIVES	**3 392**	**1 342.94**	**0.40**	**3 470**	**1 652.86**	**0.48**	**20.31**	34.38
TUT	797	123.65	**0.16**	820	188.06	**0.23**	47.82	84.27
CPUT	715	126.94	**0.18**	749	155.26	**0.21**	16.76	110.47
CUT	247	35.26	**0.14**	260	39.56	**0.15**	6.59	-12.04
VUT	309	36.50	**0.12**	322	44.73	**0.14**	17.60	98.83
DUT	561	49.57	**0.09**	574	48.45	**0.08**	-4.47	35.58
MUT	133	4.11	**0.03**	152	7.57	**0.05**	61.16	9.57
TOTAL UoTS	**2 762**	**376.03**	**0.14**	**2 877**	**483.63**	**0.17**	**23.47**	69.43
ALL INSTITUTIONS	**16 320**	**9 109.34**	**0.56**	**16 684**	**9 747.80**	**0.58**	**4.67**	**16.09**

Annexure 11: Staff Qualifications and Student-Staff Ratios by Cluster, 2010

	Headcount of permanent staff	Research Publication Units Accrued	Per Capita Output	Student Numbers	Staff Student Ratio	Staff with Masters as highest qualification	% Staff with M	Staff with PhD as highest qualification	% Staff with PhD
CLUSTER A									
UCT	982	1 253.03	**1.28**	24674	25.13	287	29.23	601	61.20
US	917	1 034.70	**1.13**	27372	29.85	292	31.84	483	52.67
RU	321	325.33	**1.01**	7222	22.50	92	28.66	179	55.76
WITS	997	936.14	**0.94**	29745	29.83	331	33.20	529	53.06
UP	1 676	1 187.46	**0.71**	57115	34.08	552	32.94	650	38.78
	4 893	**4 736.66**		**146128**	**28.28**	**1554**	**31.76**	**2442**	**49.91**
CLUSTER B									
UKZN	1 403	1 146.51	**0.82**	41244	29.40	493	35.14	558	39.77
UJ	884	610.90	**0.69**	48373	54.72	217	24.55	198	22.40
UFS	795	496.49	**0.62**	29902	37.61	328	41.26	351	44.15
NWU	1 086	585.94	**0.54**	55732	51.32	361	33.24	529	48.71
UNISA*	1 404	734.60	**0.52**	293238	208.86	336	23.93	448	31.91
UWC	509	266.82	**0.52**	18009	35.38	173	33.99	247	48.53
NMMU	574	255.51	**0.45**	26123	45.51	212	36.93	218	37.98
	6 655	**4 096.77**		**512621**	**77.03**	**2120**	**31.86**	**2549**	**38.30**
Without UNISA				**219383**	**32.97**				
CLUSTER C									
TUT	820	188.06	**0.23**	51797	63.17	314	38.29	157	19.15
CPUT	749	155.26	**0.21**	32167	42.95	312	41.66	93	12.42
UFH	292	142.22	**0.49**	10735	36.76	124	42.47	93	31.85
UL	770	93.25	**0.12**	18177	23.61	346	44.94	153	19.87
UV	321	76.76	**0.24**	10679	33.27	148	46.11	104	32.40
UZ	253	66.66	**0.26**	14727	58.21	97	38.34	85	33.60
WSU	608	51.85	**0.09**	26772	44.03	188	30.92	66	10.86
DUT	574	48.45	**0.08**	25184	43.87	242	42.16	62	10.80
VUT	322	44.73	**0.14**	21423	66.53	133	41.30	46	14.29
CUT	260	39.56	**0.15**	12581	48.39	108	41.54	70	26.92
MUT	152	7.57	**0.05**	10033	66.01	71	46.71	9	5.92
	5 121	**914.37**		**234275**	**47.89**	**2083**	**40.68**	**938**	**18.32**

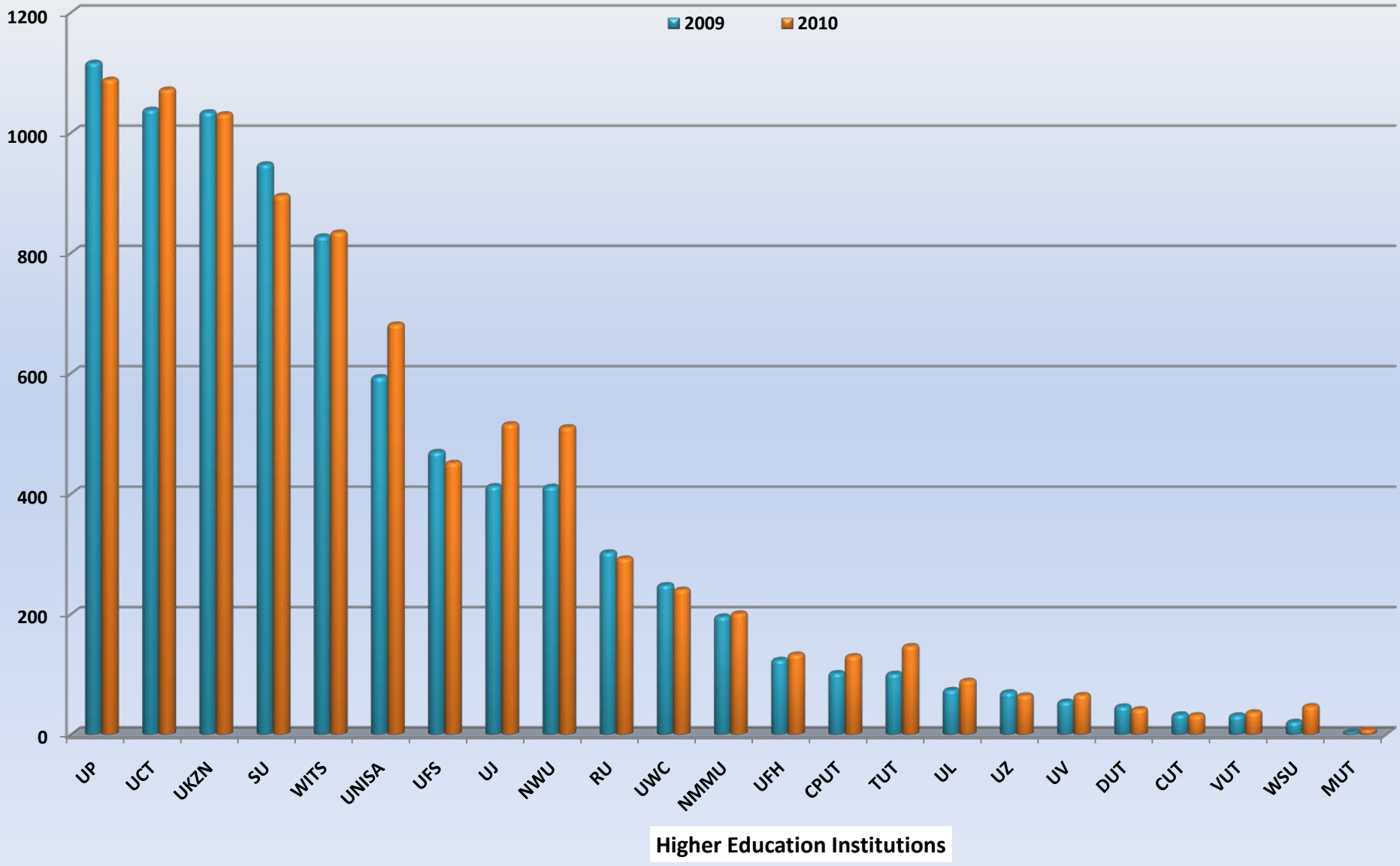
Annexure 12: Weighted Research Output, 2009-2010

	RESEARCH OUTPUT 2009						RESEARCH OUTPUT 2010						
	Headcount of permanent staff	Research Publications (Weighted 1)	Research Masters Graduates (Weighted 1)	Doctorate Graduates (Weighted 3)	Total Weighted Research Output	**Weighted Output per staff member**	Headcount of permanent staff	Research Publications (Weighted 1)	Research Masters Graduates (Weighted 1)	Doctorate Graduates (Weighted 3)	Total Weighted Research Output	**Weighted Output per staff member**	**% Output of the Norm**
SU	873	1 051.47	540.36	139	2008.83	**2.30**	917	1 034.70	612.69	522	2169.39	**2.37**	189
UCT	965	1 188.22	339.55	178	2061.77	**2.14**	982	1 253.03	434.17	480	2167.20	**2.21**	177
RU	322	350.99	117.50	32	564.49	**1.75**	321	325.33	158.00	132	615.33	**1.92**	153
WITS	979	921.67	424.17	124	1717.84	**1.75**	997	936.14	416.56	318	1670.70	**1.68**	134
UKZN	1 452	1 108.20	443.40	159	2028.60	**1.40**	1 403	1 146.51	437.34	489	2072.85	**1.48**	118
UP	1 635	1 187.53	511.56	196	2287.09	**1.40**	1 676	1 187.46	636.99	564	2388.45	**1.43**	114
UFS	779	512.72	249.26	78	995.98	**1.28**	795	496.49	243.06	300	1039.55	**1.31**	105
UWC	524	278.09	165.00	47	584.09	**1.11**	509	266.82	220.50	180	667.32	**1.31**	105
UFH	347	136.60	53.15	34	291.75	**0.84**	292	142.22	116.67	108	366.89	**1.26**	101
NWU	996	448.39	368.66	123	1186.05	**1.19**	1 086	585.94	352.62	387	1325.56	**1.22**	98
UZ	246	74.35	32.00	21	169.35	**0.69**	253	66.68	51.00	57	174.68	**0.69**	55
UL	746	73.77	127.73	17	252.50	**0.34**	770	93.25	137.78	30	261.03	**0.34**	27
UV	302	58.37	18.25	4	88.62	**0.29**	321	76.76	31.25	24	132.01	**0.41**	33
TOTAL UNIV	**10 166**				**14236.96**	1.40	**10 322**				**15050.95**	1.46	
NMMU	569	224.91	161.90	39	503.81	**0.89**	574	255.51	208.97	192	656.48	**1.14**	123
UJ	856	466.82	221.00	70	897.82	**1.05**	884	610.90	237.75	153	1001.65	**1.13**	117
UNISA	1 391	625.70	99.87	71	938.57	**0.67**	1 404	734.60	89.48	165	989.08	**0.70**	61
WSU	576	25.51	4.00	0	29.51	**0.05**	608	51.85	1.88	3	56.73	**0.09**	13
TOTAL COMPR	**3 392**				**2369.70**	0.70	**3 470**				**2703.93**	0.78	
TUT	797	123.65	131.50	25	330.15	**0.41**	820	188.06	105.50	66	359.56	**0.44**	88
CPUT	715	126.94	87.00	12	249.94	**0.35**	749	155.26	84.00	33	272.26	**0.36**	73
CUT	247	35.26	30.50	4	77.76	**0.31**	260	39.56	14.50	9	63.06	**0.24**	49
VUT	309	36.50	15.50	2	58.00	**0.19**	322	44.73	10.00	12	66.73	**0.21**	41
DUT	561	49.57	37.50	5	102.07	**0.18**	574	48.45	32.50	36	116.95	**0.20**	41
MUT	133	4.11	0.00	0	4.11	**0.03**	152	7.57	0.00	0	7.57	**0.05**	10
TOTAL UoTS	**2 762**				**822.03**	0.30	**2 877**				**886.13**	0.31	
ALL HEIs	**16 320**				**17428.69**	1.07	**16 669**				**18641.00**	1.12	

ANNEXURE 13 A : Journal Outputs, 2005-2010

HEIs	2005	2006	2007	2008	2009	2010	Growth 2009 to 2010	% of total journal publications	Annual Growth Rate 05-10
UP	1007.54	1102.02	1084.11	1109.29	1116.29	1087.93	**-2.54%**	12.65	**1.29**
UCT	754.7	792.9	914.7	958.59	1038.06	1071.70	**3.24%**	12.46	**6.02**
UKZN	859.3	977.8	793.5	917.36	1033.93	1030.48	**-0.33%**	11.98	**3.07**
SU	789.39	895.91	828.74	879.56	947.21	894.85	**-5.53%**	10.40	**2.11**
WITS	712.2	758.4	807.02	767.75	827.29	833.83	**0.79%**	9.69	**2.66**
UNISA	502.25	564.7	521.75	613.71	593.26	680.83	**14.76%**	7.91	**5.20**
UFS	396.37	453.2	451.84	396.13	469.66	451.41	**-3.89%**	5.25	**2.19**
UJ	300.8	360.77	330.64	354.99	412.64	515.75	**24.99%**	5.99	**9.40**
NWU	318.38	351.5	358.21	471.33	411.81	510.76	**24.03%**	5.94	**8.20**
RU	232.6	248.52	258.68	287.82	302.64	292.38	**-3.39%**	3.40	**3.89**
UWC	159.1	178.3	211	214.28	248.15	240.53	**-3.07%**	2.80	**7.13**
NMMU	183.72	172.2	165.04	156.44	195.89	200.92	**2.57%**	2.34	**1.50**
UFH	51.24	63.34	62.5	78.45	123.88	132.64	**7.07%**	1.54	**17.18**
CPUT	51.9	47.1	42.1	61.68	101.81	129.84	**27.53%**	1.51	**16.51**
TUT	69.9	82	80.5	111.08	100.74	146.74	**45.66%**	1.71	**13.16**
UL	105.97	107.01	97.37	83.52	73.77	89.07	**20.74%**	1.04	**-2.85**
UZ	44.27	53.91	44.98	64.68	69.78	64.69	**-7.29%**	0.75	**6.53**
UV	26.9	18.69	17.51	32.61	54.35	65.19	**19.94%**	0.76	**15.90**
DUT	20.18	31	31.5	23.45	46.32	41.70	**-9.97%**	0.48	**12.86**
CUT	25.23	37.21	28.3	23.9	33.04	31.71	**-4.03%**	0.37	**3.88**
VUT	15.14	16.42	16	17.34	31.4	36.48	**16.18%**	0.42	**15.79**
WSU	33.32	22.23	15.85	12.8	20.86	46.90	**124.83%**	0.55	**5.86**
MUT	1.5	5	1.41	1.41	3.83	7.03	**83.55%**	0.08	**29.36**
TOTAL	**6661.9**	**7340.13**	**7163.25**	**7638.17**	**8256.61**	**8603.36**	**4.20%**	100.00	**4.35**

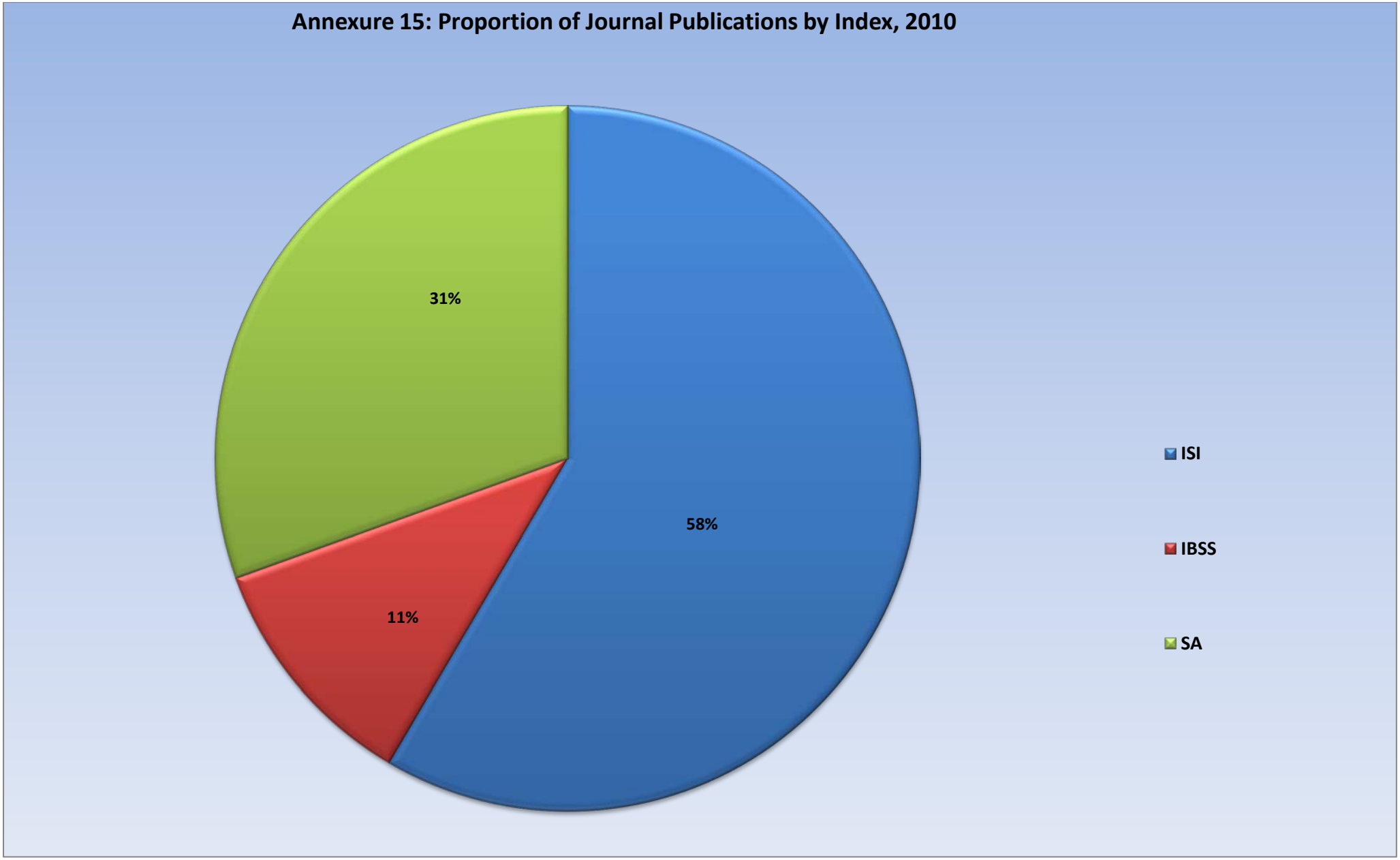
Annexure 13 B: Increase / Decrease in Journal Outputs 2009-2010



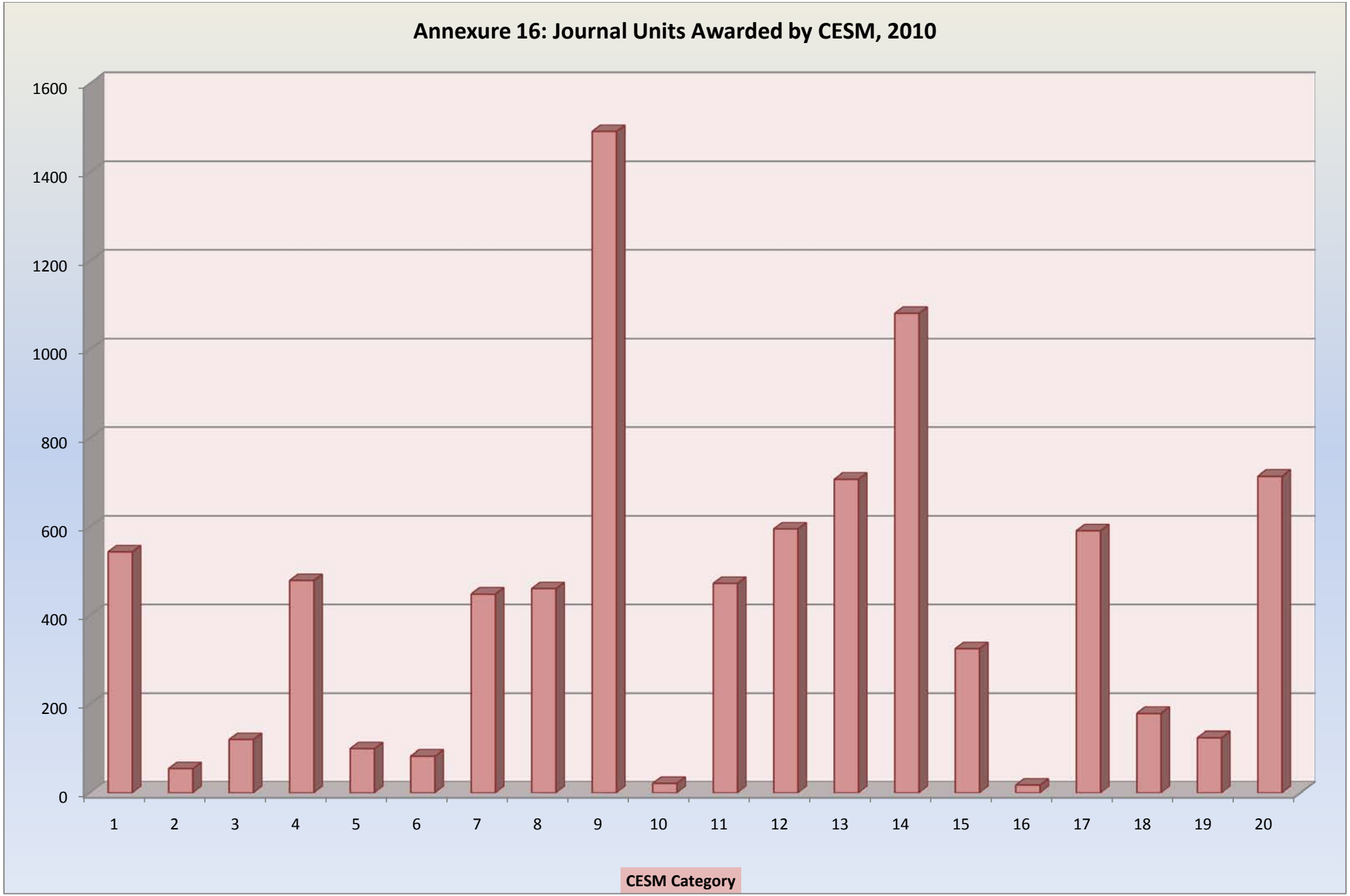
ANNEXURE 14 : Journal Publications by Index, 2010

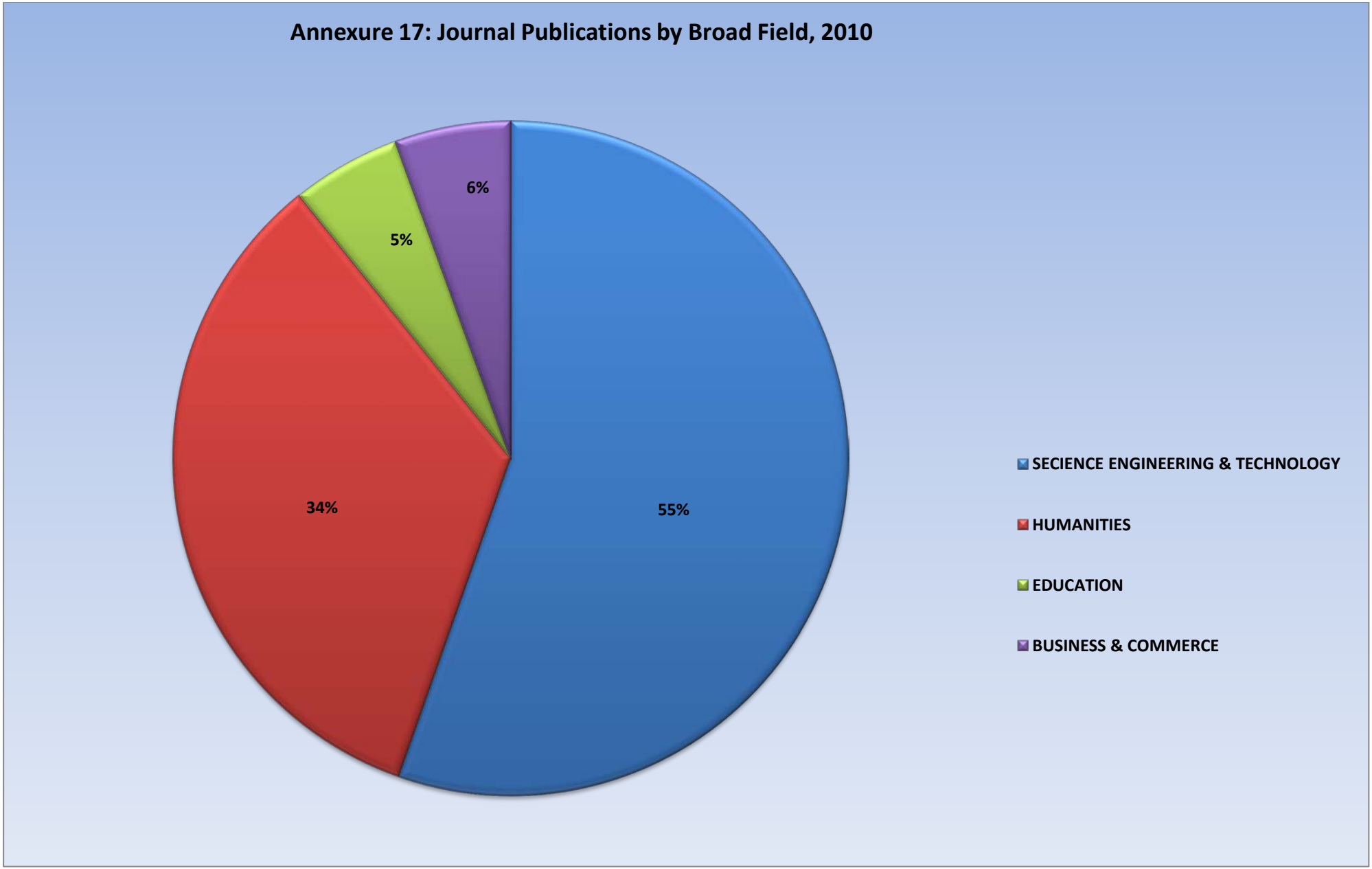
Name of Institution	ISI	IBSS	SA	Total	International	% International
UP	726.97	81.40	279.56	1087.93	808.37	74.30
UCT	748.18	137.02	186.50	1071.70	885.20	82.60
UKZN	591.73	321.26	117.49	1030.48	912.99	88.60
SUN	604.14	44.71	246.00	894.85	648.85	72.51
Wits	562.01	77.17	194.65	833.83	639.18	76.66
UNISA	80.01	68.24	532.58	680.83	148.25	21.77
UJ	262.40	48.50	204.85	515.75	310.90	60.28
NWU	247.14	28.92	234.70	510.76	276.06	54.05
UFS	240.53	19.00	191.88	451.41	259.53	57.49
RU	225.12	23.42	43.84	292.38	248.54	85.01
UWC	129.92	23.23	87.38	240.53	153.15	63.67
NMMU	90.69	25.56	84.67	200.92	116.25	57.86
TUT	95.68	11.00	40.06	146.74	106.68	72.70
UFH	99.89	7.00	25.75	132.64	106.89	80.59
CPUT	96.04	4.00	29.80	129.84	100.04	77.05
UL	48.76	1.50	38.81	89.07	50.26	56.43
UV	44.78	2.50	17.91	65.19	47.28	72.53
UZ	44.27	0.00	20.42	64.69	44.27	68.43
WSU	31.90	2.20	12.80	46.90	34.10	72.71
DUT	24.90	5.50	11.30	41.70	30.40	72.90
VUT	16.76	18.22	1.50	36.48	34.98	95.89
CUT	9.27	0.50	21.94	31.71	9.77	30.81
MUT	7.03	0.00	0.00	7.03	7.03	100.00
Total	**5028.12**	**950.85**	**2624.39**	**8603.36**	**5978.97**	**69.50**

Annexure 15: Proportion of Journal Publications by Index, 2010



Annexure 16: Journal Units Awarded by CESM, 2010

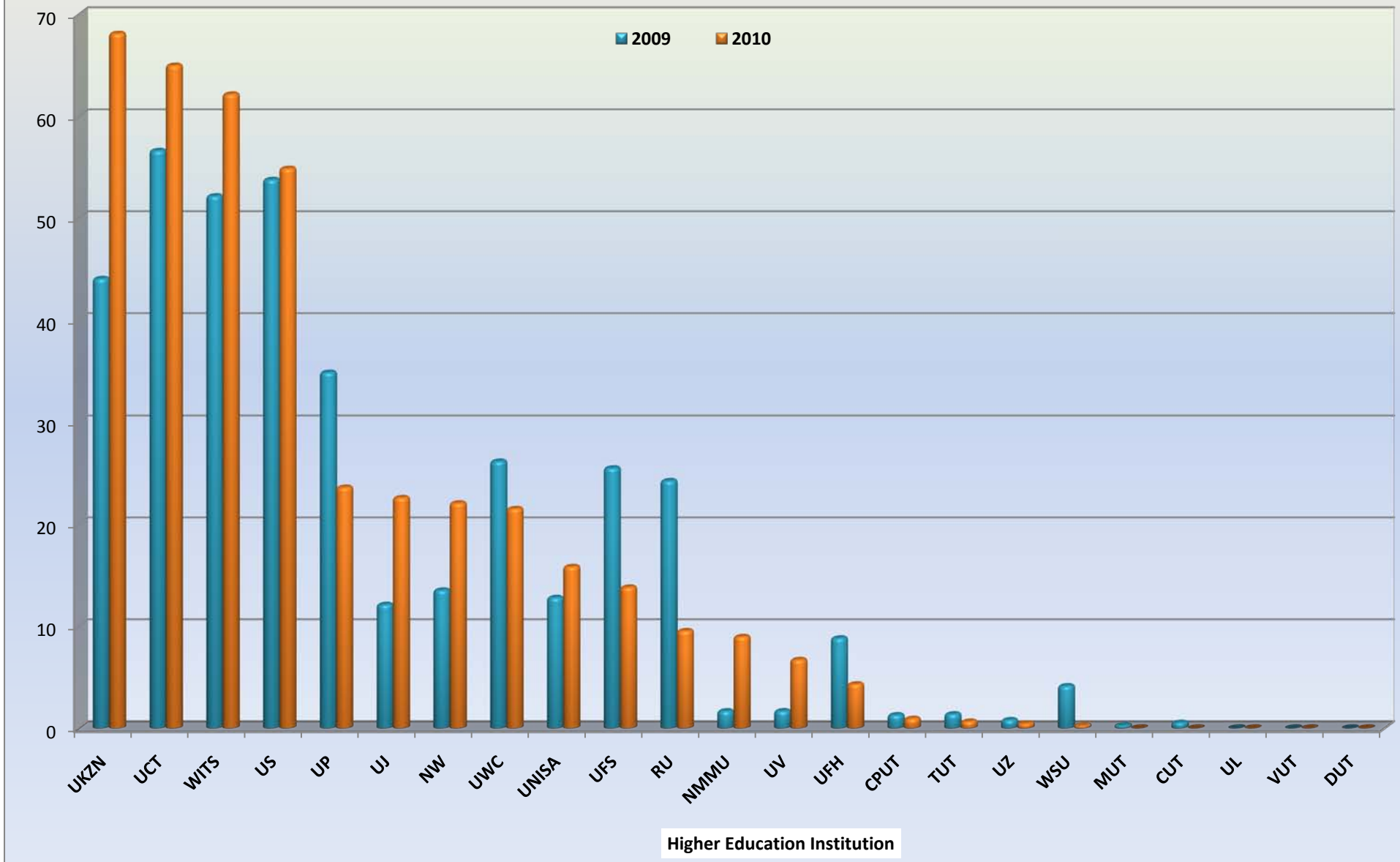


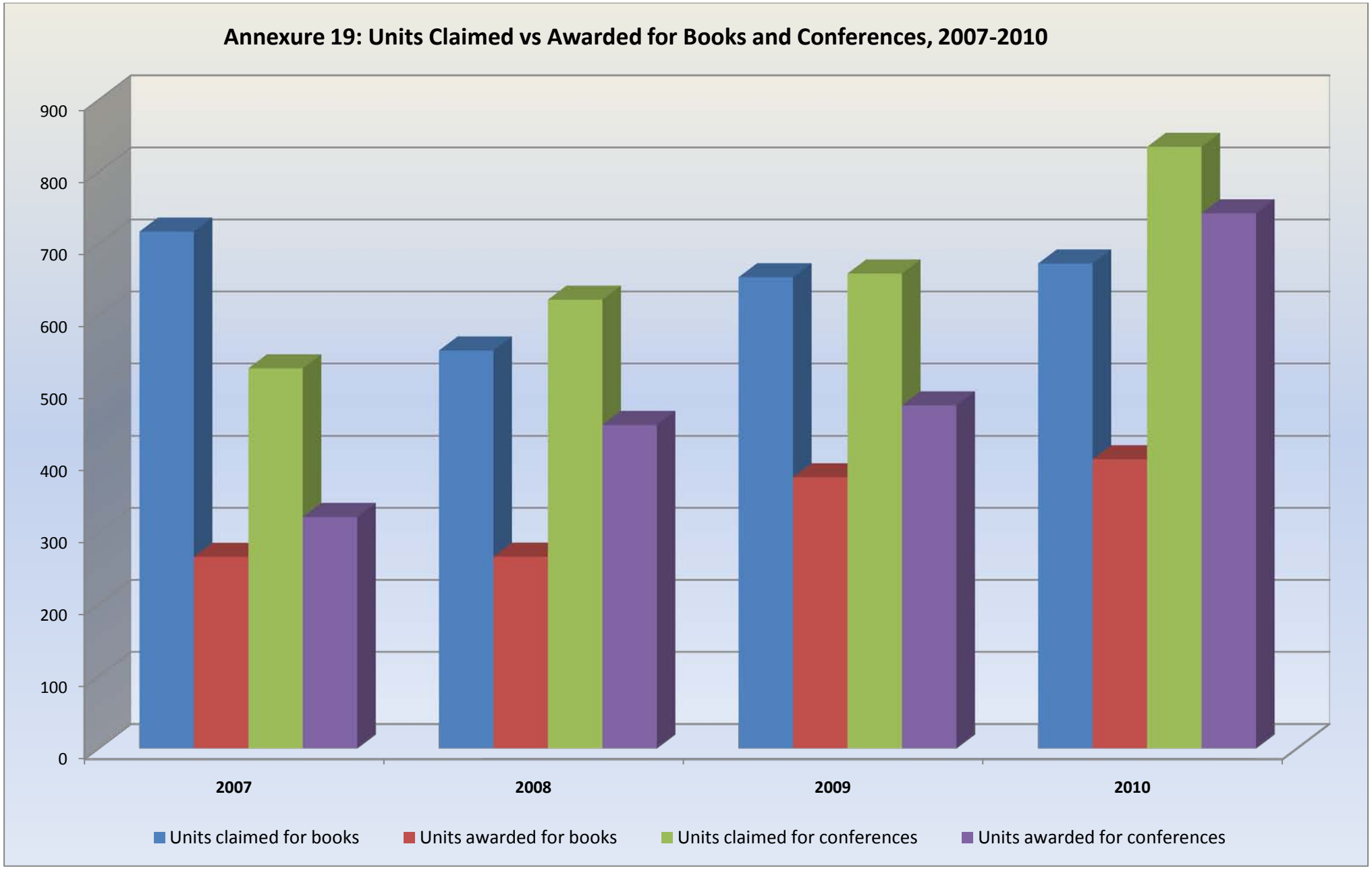

Annexure 17: Journal Publications by Broad Field, 2010
6%
5%
34%
55%
SECIENCE ENGINEERING & TECHNOLOGY
HUMANITIES
EDUCATION
BUSINESS & COMMERCE

Annexure 18 A: Book Publication Outputs, 2005-2010

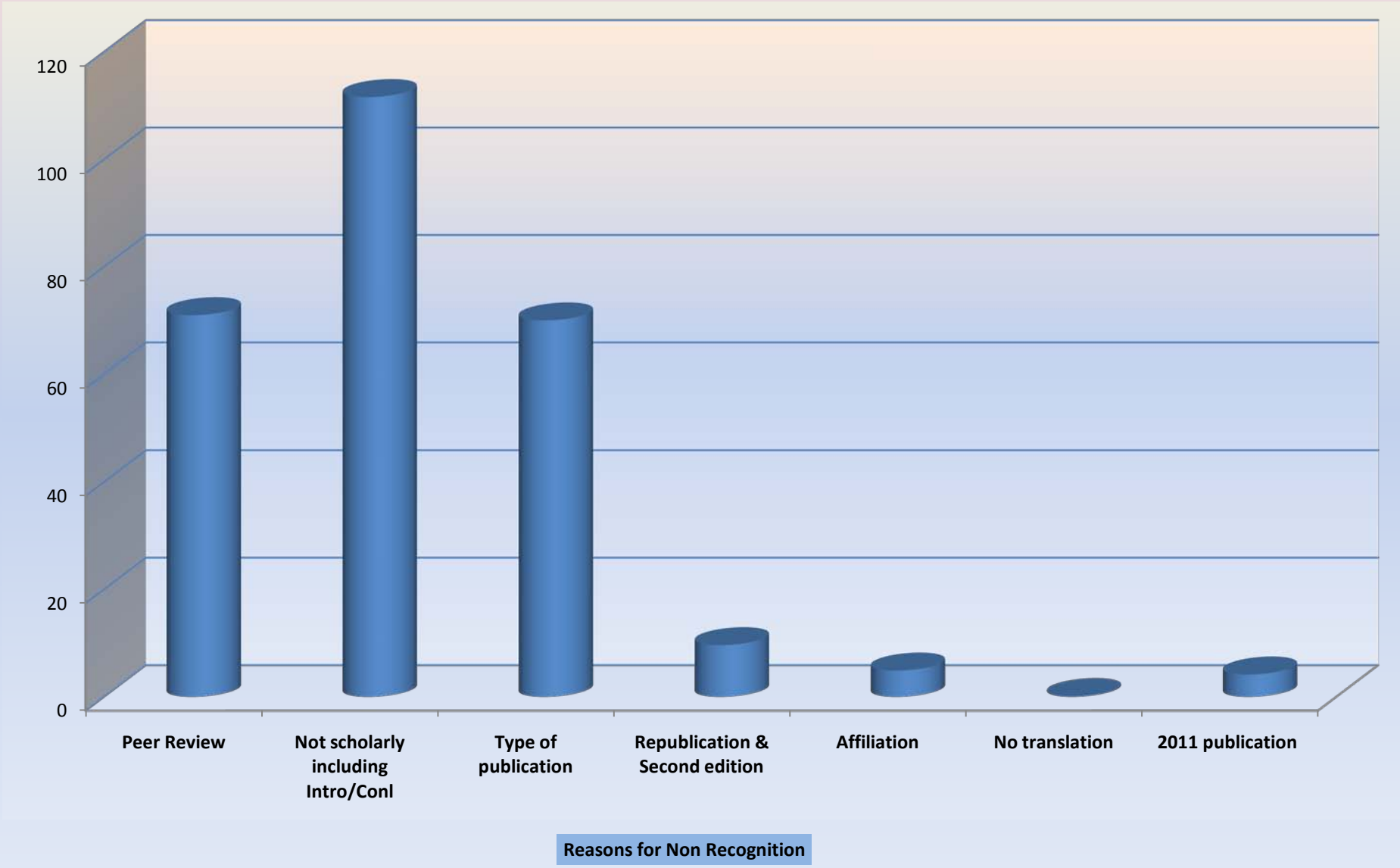
HEIs	2005	2006	2007	2008	2009	2010	Growth 2009 to 2010	Growth Rate 2005-2010	% of total book publications by HEI
UKZN	51.87	73.89	57.99	24.51	44.07	**68.12**	54.57	4.65	16.96
UCT	76.3	44.87	53.14	53.09	56.63	**65.00**	14.78	-2.64	16.18
WITS	17.08	46.47	67.16	49.25	52.18	**62.17**	19.15	24.03	15.48
US	14	9.93	12.15	24.67	53.79	**54.88**	2.03	25.57	13.66
UP	23.9	47.74	28.42	15.76	34.86	**23.63**	-32.21	-0.19	5.88
UJ	11.55	9.8	4.12	6.38	12.13	**22.61**	86.40	11.85	5.63
NW	0.23	1.55	9.2	12.93	13.54	**22.09**	63.15	114.00	5.50
UWC	6.41	23.86	1.02	17.53	26.19	**21.54**	-17.75	22.39	5.36
UNISA	6.66	10.36	13.26	18.26	12.81	**15.85**	23.73	15.55	3.95
UFS	7.68	1.95	5.36	21.83	25.53	**13.83**	-45.83	10.30	3.44
RU	5.2	27.9	4.7	8.98	24.28	**9.56**	-60.63	10.68	2.38
NMMU	2.26	1.71	0.33	5.99	1.68	**8.98**	434.52	25.85	2.24
UV	0	0.14	0	0.55	1.69	**6.72**	297.63	100.00	1.67
UFH	0.18	7.78	7.14	0.3	8.84	**4.33**	-51.02	69.90	1.08
CPUT	0	0	0	0.58	1.3	**0.95**	-26.92	100.00	0.24
TUT	0	1.51	1.18	5	1.39	**0.67**	-51.80	100.00	0.17
UZ	0	0.33	0.12	0.47	0.82	**0.47**	-42.68	100.00	0.12
WSU	0	0.2	0.83	0.35	4.15	**0.28**	-93.25	100.00	0.07
MUT	0	0	0	0	0.28	**0.00**	-100.00	0.00	0.00
CUT	0	0	0	0	0.55	**0.00**	-100.00	0.00	0.00
UL	0	0	0	0	0	**0.00**	0.00	0.00	0.00
VUT	0	0	0	0	0	**0.00**	0.00	0.00	0.00
DUT	0	1.05	0	0	0	**0.00**	0.00	0.00	0.00
TOTAL	**223.32**	**311.04**	**266.12**	**266.43**	376.71	**401.68**	6.63	10.28	100.00

Annexure 18 B: Increase / Decrease in Book Publication Units 2009 vis -v 2010

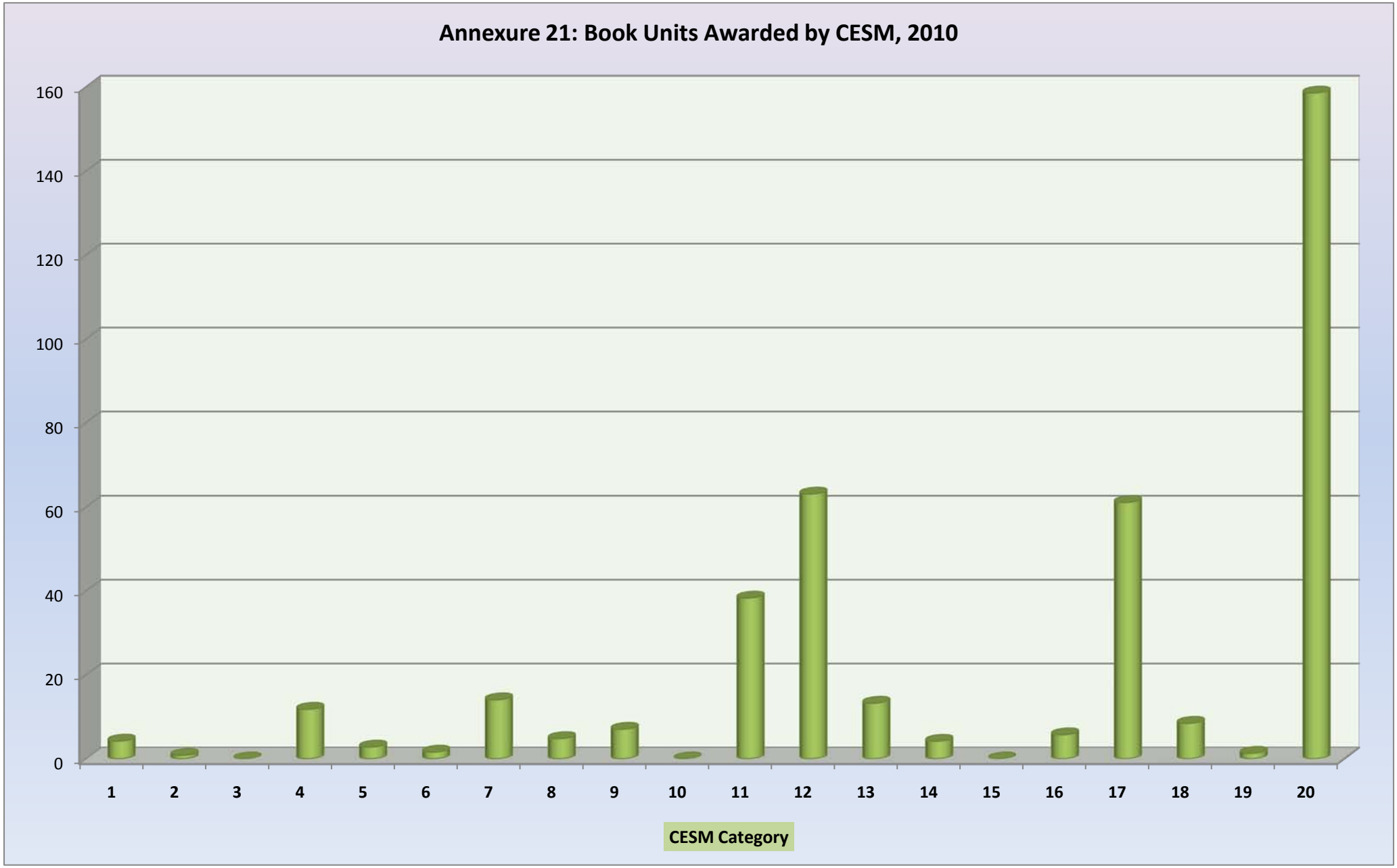



Annexure 19: Units Claimed vs Awarded for Books and Conferences, 2007-2010
900
800
700
600
500
400
300
200
100
0
2007
2008
2009
2010
Units claimed for books
Units awarded for books
Units claimed for conferences
Units awarded for conferences

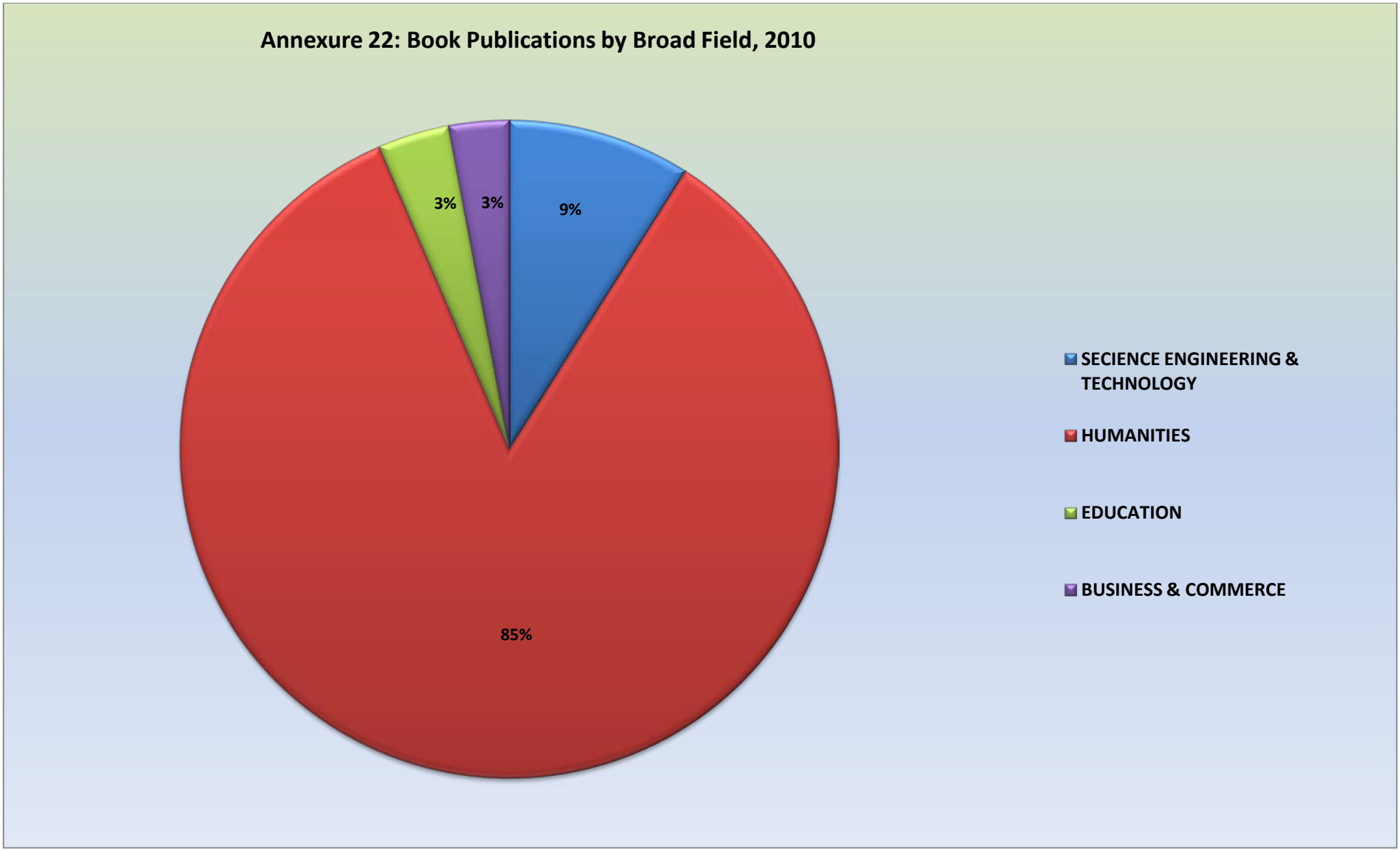
Annexure 20: Reasons for Non-Recognition for Books (units) 2010



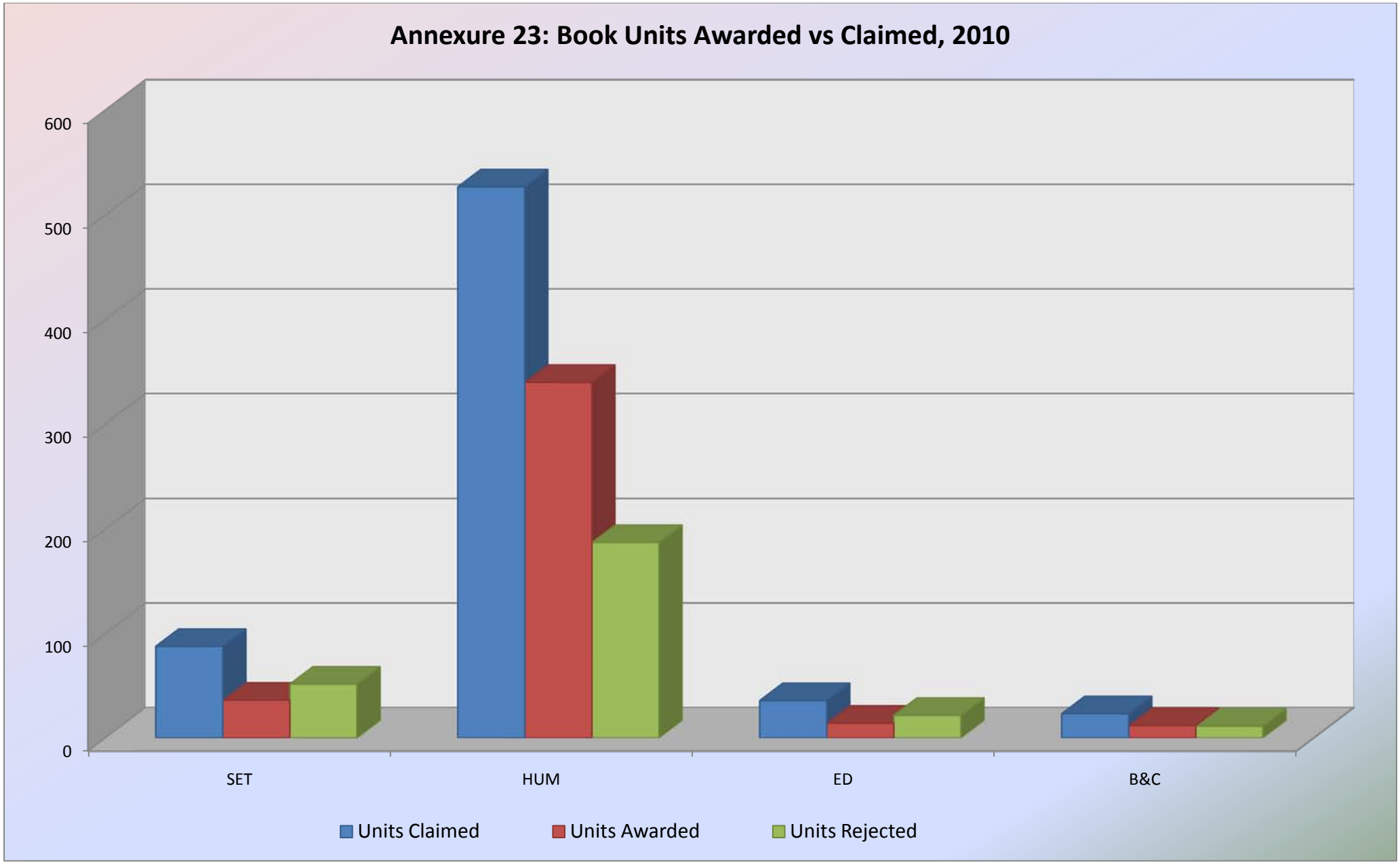
s


Annexure 21: Book Units Awarded by CESM, 2010
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
CESM Category

Annexure 22: Book Publications by Broad Field, 2010



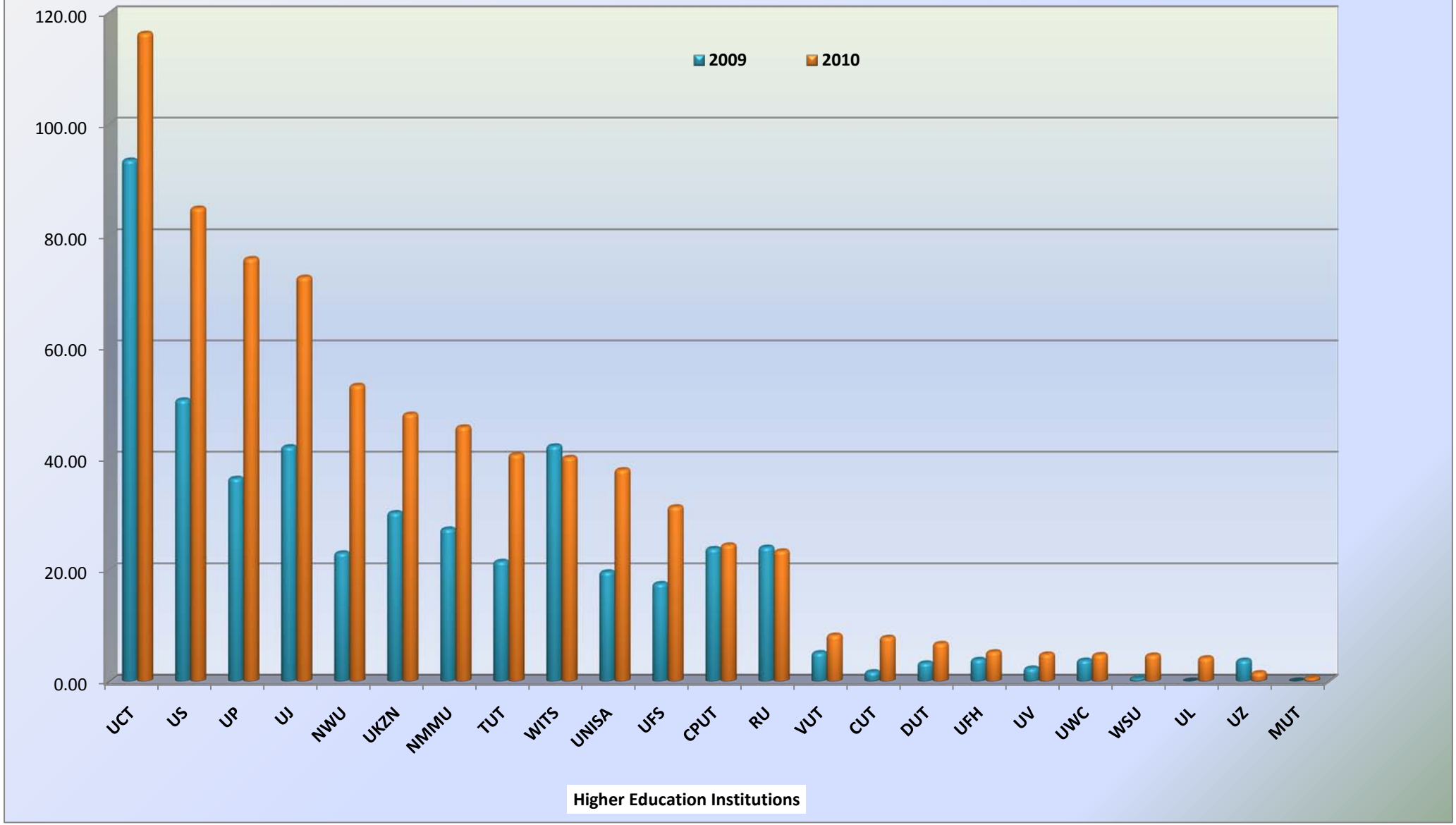
Annexure 23: Book Units Awarded vs Claimed, 2010



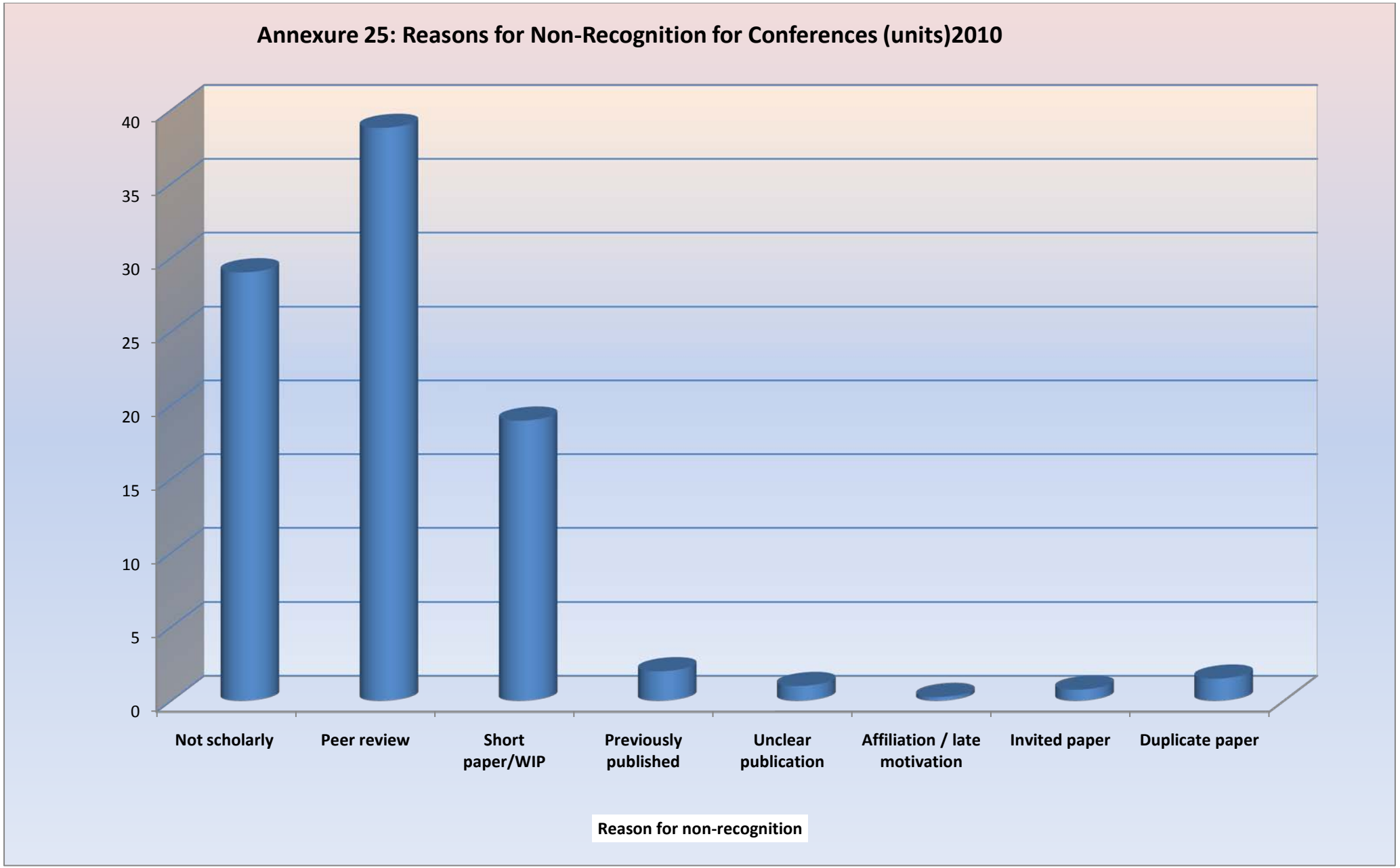
Annexure 24 A: Conference Proceedings Outputs, 2005-2010

HEIs	2005	2006	2007	2008	2009	2010	% Contribution to 2010 Sector Total	% Annual Increase 05-09	Growth rate 05-10
UCT	61.75	69.34	49.36	74.47	93.53	**116.33**	15.66	24.38	11.13
US	22.74	28.09	39.11	44.19	50.47	**84.97**	11.44	68.36	24.57
UP	69.34	52.14	43.30	58.87	36.38	**75.90**	10.22	108.63	1.52
UJ	13.64	15.99	15.97	27.65	42.05	**72.54**	9.77	72.51	32.12
NWU	7.58	7.80	8.79	18.25	23.04	**53.09**	7.15	130.43	38.32
UKZN	37.47	32.02	24.99	35.58	30.20	**47.91**	6.45	58.64	4.18
NMMU	23.30	13.82	14.33	21.21	27.34	**45.61**	6.14	66.83	11.85
TUT	17.61	22.90	20.94	26.13	21.52	**40.65**	5.47	88.89	14.96
WITS	31.30	38.40	36.13	23.67	42.20	**40.14**	5.40	-4.88	4.23
UNISA	10.94	10.68	18.83	20.41	19.63	**37.92**	5.11	93.17	23.02
UFS	6.93	11.32	15.75	23.17	17.53	**31.25**	4.21	78.27	28.53
CPUT	16.77	16.72	6.63	17.88	23.83	**24.47**	3.29	2.69	6.50
RU	14.98	15.70	11.00	33.22	24.07	**23.39**	3.15	-2.83	7.71
VUT	2.00	4.26	1.50	2.00	5.10	**8.25**	1.11	61.76	26.64
CUT	1.60	0.50	0.00	0.50	1.67	**7.85**	1.06	370.06	30.35
DUT	3.25	3.00	3.83	2.75	3.25	**6.75**	0.91	107.69	12.95
UFH	1.50	0.66	3.00	8.00	3.88	**5.25**	0.71	35.31	23.22
UV	0.00	1.00	0.00	1.00	2.33	**4.85**	0.65	108.15	100.00
UWC	0.50	0.25	4.75	8.14	3.75	**4.75**	0.64	26.67	45.53
WSU	0.00	0.00	1.83	1.00	0.50	**4.67**	0.63	834.00	100.00
UL	0.00	0.00	0.00	0.50	0.00	**4.18**	0.56	100.00	100.00
UZ	0.00	5.48	1.55	0.00	3.75	**1.50**	0.20	-60.00	100.00
MUT	1.58	1.50	0.00	0.17	0.00	**0.54**	0.07	100.00	-16.38
TOTAL	**344.78**	**351.57**	**321.59**	**448.76**	**476.02**	**742.76**	**100.00**	56.04	13.65

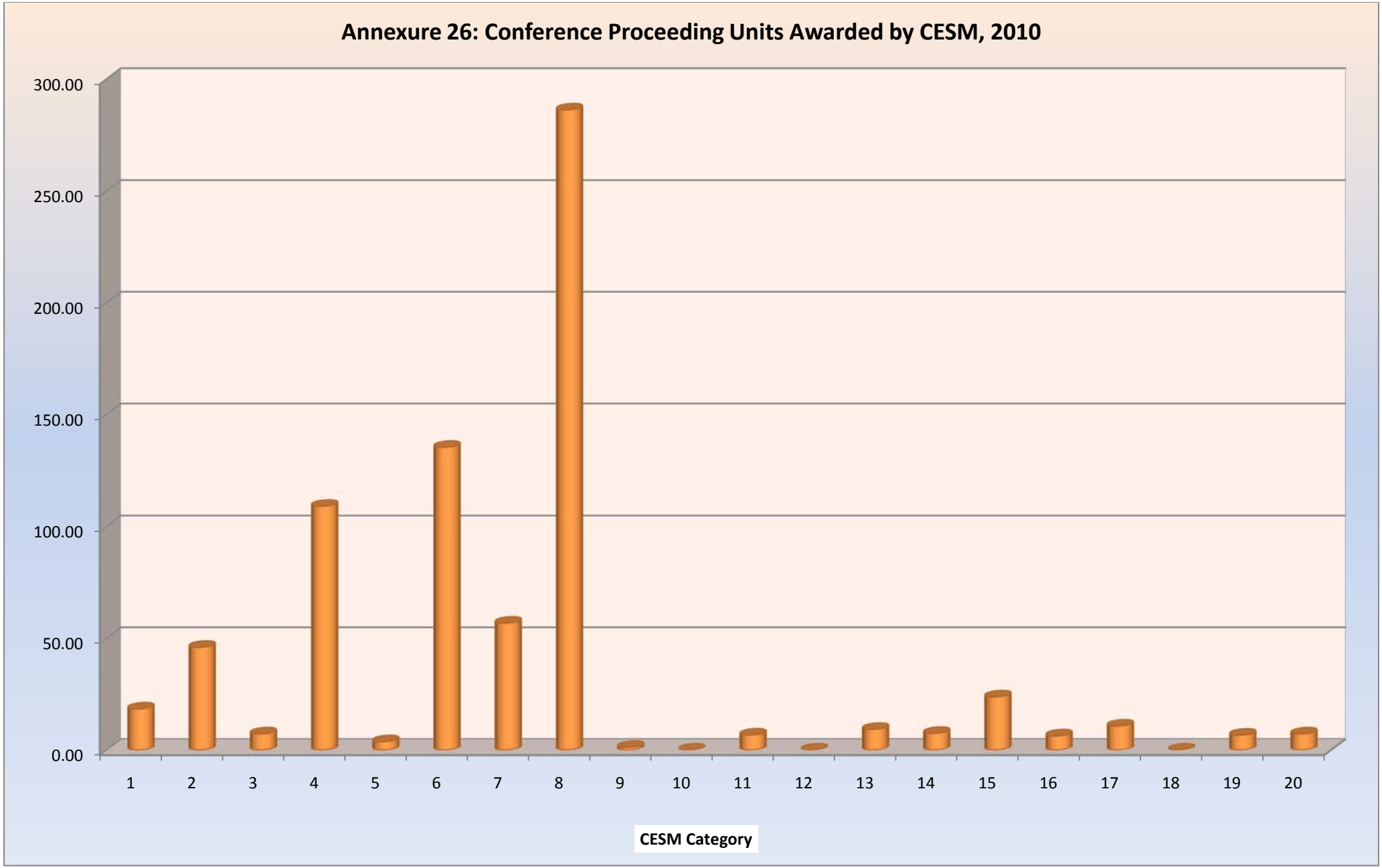
Annexure 24 B: Increase / Decrease in Conference Publication 2009 vis -v 2010



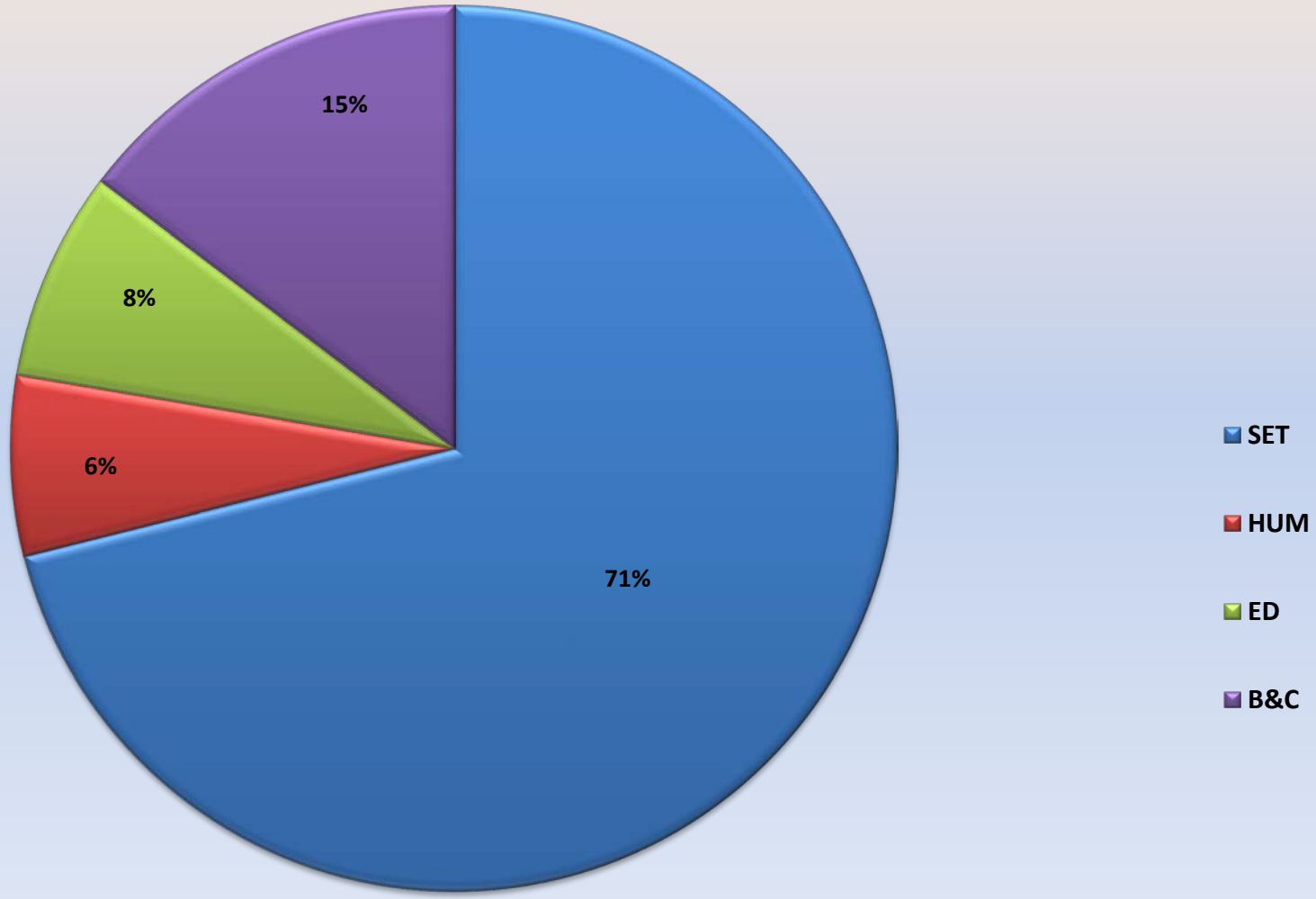
Annexure 25: Reasons for Non-Recognition for Conferences (units)2010



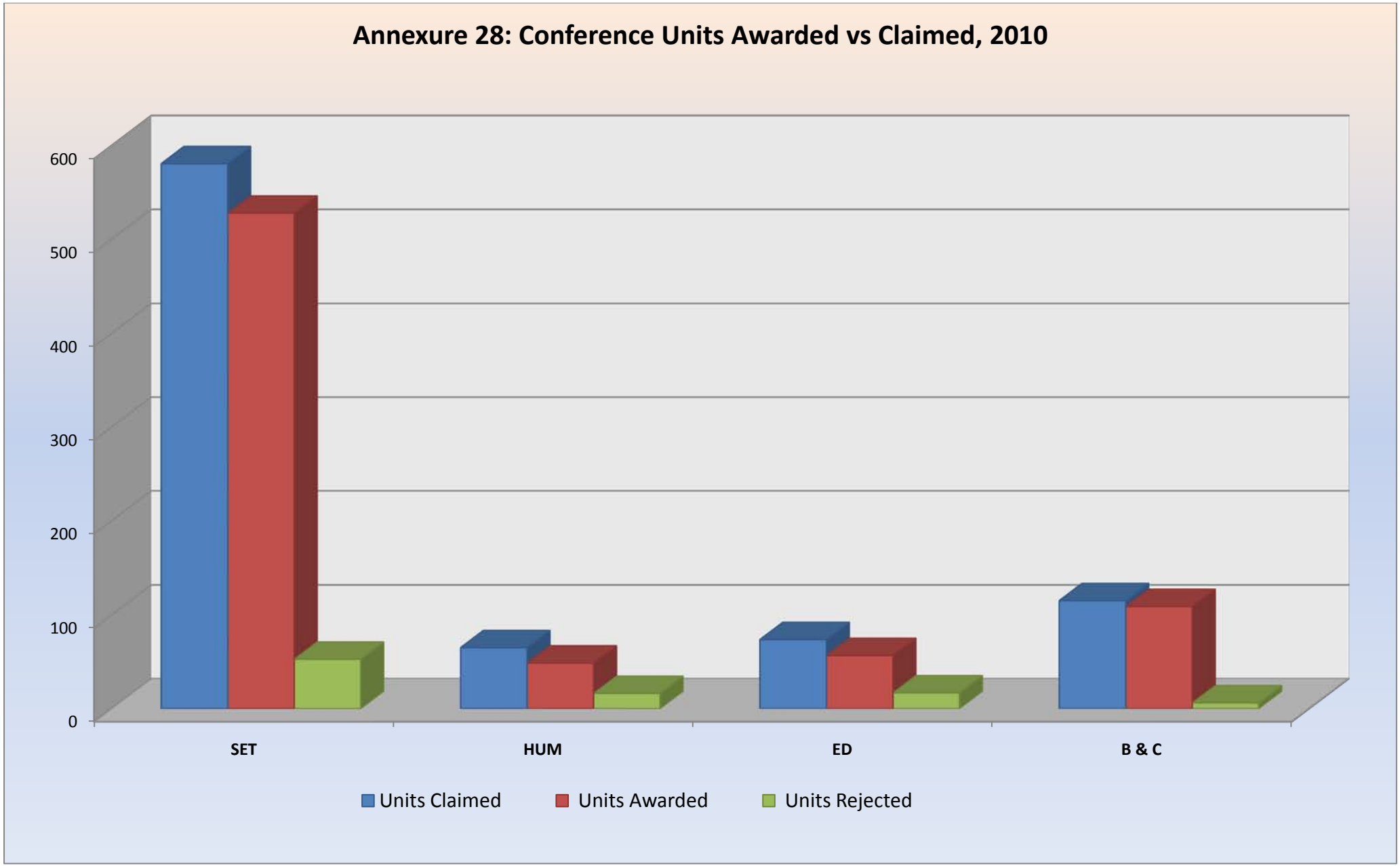
Annexure 26: Conference Proceeding Units Awarded by CESM, 2010



Annexure 27: Conference Publications by Broad Field, 2010



Annexure 28: Conference Units Awarded vs Claimed, 2010



ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
1	Southern Africa Telecommunication Networks and Applications Conference (SATNAC) 2010	Accepted	Accepted (except work in progress)	Accepted	Accepted	Accepted (except work in progress)	**Accepted (except work in progress)**
2	Proceedings of the 7th Conference on the Industrial and Commercial Use of Energy (ICUE)	Accepted	Rejected	Accepted	Accepted	Accepted	**Accepted**
3	Proceedings of the Eighteenth Conference on the Domestic Use of Energy (DUE)	Accepted	Rejected	Accepted	Accepted	Accepted	**Accepted**
4	Proceedings of the 29th Southern African Transport Conference (SATC 2010)	Accepted	Rejected	Accepted	Accepted	Accepted	**Accepted**
5	Proceedings of the 12th Annual Conference on World Wide Web Applications- WWW 2010		Rejected	Rejected	Accepted	Accepted	**Accepted**
6	Procedings of the 2010 Information Security for South Africa Conference (ISSA 2010)		Accepted	No submission	Accepted	Accepted	**Accepted**
7	Proceedings of the SAICSIT 2010 Conference	Accepted	Accepted	Accepted	Accepted	Accepted	**Accepted**
8	Proceedings of the Twenty-First Annual Symposium of the Pattern Recognition Association of South Africa (PRASA)	Accepted	Accepted	Accepted	Accepted	Accepted	**Accepted**
9	Proceedings of the 16th Annual Congress of the Association for Mathematics Education of South Africa (AMESA)	Accepted	No Submission	Accepted	Accepted & some were short papers	Accepted	**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
10	Proceedings of the 19th Southern African Universities Power Engineering Conference (SAUPEC 2010)		No Submission	Accepted	Accepted	Accepted	**Accepted**
11	Proceedings of the Eighteenth Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE 2010)	Rejected	Accepted (except short papers)	Accepted (except short papers)	Accepted (except short papers)	Accepted (except short papers)	**Accepted**
12	Proceedings of the 26th Annual Conference Association of Researchers in Construction management -ARCOM.		Accepted	Accepted	Accepted	Accepted	**Accepted**
13	The Fifth Built Environment Conference	Accepted	Rejected	Accepted	Accepted	Accepted	**Accepted**
14	IST-Africa 2010 Conference Proceedings: International Information Management Corporation (IIMC)		Accepted	Accepted	Accepted	Accepted	**Accepted**
15	The South African Computer Lecturers' Association - SACLA 2010		Accepted	Accepted	No Submission	Accepted	**Accepted**
16	World Academy of Science, Engineering and Technology (WASET)		No Submission	Accepted	Accepted	Accepted	**Accepted**
17	Global Business and Technology Association Conference (GBATA)		Rejected	Accepted	Accepted	Accepted	**Accepted**
18	The SAIMS 22nd Annual Conference: A Discourse on the Influence of Management.		Rejected	Accepted	Rejected	Accepted	**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
19	WCECS 2010: World Congress on Engineering and Computer Science 2010			No Submission	Accepted	Accepted	**Accepted**
20	COBRA 2010 Royal Institution of Chartered Surveyors. Legal Research Symposium,		No submission	Rejected	Rejected	Accepted	**Accepted**
21	Proceedings of Afrigraph 2010: 7th International Conference on Computer Graphics, Virtual Reality, Visualisation and Interaction in Africa		Rejected	Accepted	No submission	Accepted	**Accepted**
22	E-Learning2010, World Conference on E-learning in Corporate, Government, Healthcare, and Higher Education		Rejected	Accepted	Accepted	Accepted	**Accepted**
23	International Conference on Education and New Learning Technologies - EDULEARN10				Accepted	Accepted	**Accepted**
24	IBC Fourth International Business Conference			Rejected	Accepted	Review of abstracts only	**Accepted**
25	INTED 2010 - International Technology, Education and Development Conference			No submission	Accepted	Review of abstracts only	**Accepted**
26	15th IBIMA Conference Proceedings on Knowledge Management and Innovation: A Business Competitive Edge Perspective		Rejected	Accepted	Accepted	Peer review evidence	**Accepted**
27	PICMET '10 Proceedings: Technology Management for Global Economic Growth		Rejected	Rejected	Accepted	Peer review process	**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
28	Imaging Ourselves: Visual Identities in representation					Inhouse	**Accepted**
29	ICERI 2010 Proceedings					Review of abstracts only	**Accepted**
30	Proceedings of the 24th Annual SAIIE Conference: Sustaining SA's Global Competitiveness after 2010					Peer review process	**Accepted**
31	VIII Latin American Symposium on Nuclear Physics and Applications						**Accepted**
32	ECIS 2010 - 18th European Conference on Information Systems						**Accepted**
33	09th International Conference on Corporate Social Responsibility						**Accepted**
34	2010 International Mechanical Engineering Congress and Exposition (IMECE2010)						**Accepted**
35	14th International Heat Transfer Conference (IHTC-14)						**Accepted**
36	CIB 2010 World Congress Proceedings,						**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
37	Advances in Visual Computing: 6th International Symposium ISVC 2010: Part III						**Accepted**
38	Fourth International Platinum Conference: Platinum in Transition: "Boom or Bust"						**Accepted**
39	Proceedings of the International Conference on Information Management and Evaluation (ICIME 2010)						**Accepted**
40	Proceedings of the South African Information Security Multi-Conference (SAISMC 2010)						**Accepted**
41	SASA 2010 Peer-reviewed Proceedings of the 52nd Annual Conference of the South African Statistical Association for 2010 (SASA 2010)						**Accepted**
42	COMA'10- International Conference on Competitive Manufacturing						**Accepted**
43	Proceedings of the XIV Euralex International Congress						**Accepted**
44	Second IFIP TC 13 Symposium HCIS/WCC 2010 Human-Computer Interaction:						**Accepted**
45	Praxis towards sustainable Empowerments in South Africa						**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
46	ED-MEDIA 2010 World Conference on Educational Multimedia, Hypermedia & Telecommunications						**Accepted**
47	Journal of Physics-Conference series 217 International Conference on the Applications of the Mossbauer Effect						**Accepted**
48	E-Government, E-Services and Global Processes. Joint IFIP TC 8 and TC 6 International Conferences						**Accepted**
49	Proceedings of the 3rd International Conference on Uranium. The Future is u. Volume 1 -Uranium 2010						**Accepted**
50	Proceedings of the Leadership and Management Studies in Sub-Sahara Africa 2010 Conference						**Accepted**
51	3rd World Summit on the Knowledge Society WSKS 2010						**Accepted**
52	Scholarly Publishing in Africa: Opportunities and Impediments						**Accepted**
53	International Research Symposium in Service Management (IRSSM 2010)						**Accepted**
54	4th Biennial Conference of the Academy of World Business Marketing and Management Development. Volume 4 No 1 2010						**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
55	Proceedings of the Third IASTED Africa Conference on Modelling and Simulation (AfricaMS 2010)						**Accepted**
56	2010 International Conference on Power System Technology-POWERCON						**Accepted**
57	Key Competencies in the Knowledge Society- IFIP TC 3 International Conference KCKS 2010 (WSCC2010)						**Accepted**
58	Economics Themes I - Publication of the 3rd International Conference on Economic Theory, Policy and Applications						**Accepted**
59	The South African Council for the Quantity Surveying Profession (SACQSP) Conference 2010						**Accepted**
60	4th SARF/IRF Regional Conference for Africa: Preserving Africa's Road Network						**Accepted**
61	CICE-2010: Proceedings Canada International Conference on Education						**Accepted**
62	Proceedings of the Forty-Third Annual Hawaii International Conference on System Sciences						**Accepted**
63	Proceedings 2010 3rd International congrees on Image and Signal Processing (CISP2010)						**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
64	Second International Symposium on Service Life Design for Infrastructure						**Accepted**
65	Proceedings of the International Conference on Advances in Cement-Based Materials						**Accepted**
66	WISA 2010 Conference Proceedings. The Water Institute of Southern Africa Biennial Conference and Exhibition						**Accepted**
67	Moral Language in the New Testament						**Accepted**
68	Advances and Trends in Structural Engineering Mechanics and Computation						**Accepted**
69	Conference Proceedings on Strategy. Strategic theory and contemporary African armed conflicts						**Accepted**
70	Proceedings of the 6th International Conference on e-Government						**Accepted**
71	25th International Conference of CAD/CAM, Robotics & Factories of the Future						**Accepted**
72	PMSA Conference						**Accepted**

ANNEXURE 29: CROSS-INSTITUTIONAL ANNUAL CONFERENCE PROCEEDINGS, 2005-2010

2010 SUBMISSION		OUTCOME					
NO	**CONFERENCE NAME**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
73	World Congress on Engineering 2010 Vol 1 & 2 (WCE 2010)						**Accepted**
74	Proceedings of the 7th International workshop on OWL: Experiences and directions (OWLED 2010)						**Accepted**
75	IASTED International Conference Power and Energy Systems (AsiaPES2010)						**Accepted**