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Contribution of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country through OpenDOAR as on: 01.10.2020

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ABSTRACT

This paper study open access repositories in the contribution of BIMSTEC country through OpenDOAR to demonstrate country wise no of repositories, category wise, language wise, software wise, subject wise, software wise, content wise distribution of these repositories. These BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country which is include Bhutan, India, Myanmar, Sri Lanka, Thailand, Bangladesh, Nepal. This paper includes only one conceptual part – i) analysis of these countries through OpenDOAR set a parameter like software in use, country of origin, language wise distribution, document types etc.; and ii) growth of these countries using these OpenDOAR. Here, OAI/PMH compliant are not using OA repositories system. At present it shows country wise distribution, language wise distribution, software wise distribution, subject wise distribution etc. perspective study for this system. It will be helpful throughout the all over world to spreading free access knowledge.

Keywords: OA Archives, Green Open Access, OpenDOAR, Open Access Repositories, Institutional Repositories

Introduction: BASE -an exclusive search engine for Open Access (OA) scholarly materials recently reports coverage of 82 million OA resources (as on March 31, 2015), DOAJ now covers 10,500+ OA journals, OpenDOAR and ROAR provides listing of more that 3,500+ OA repositories (as on March 31, 2015). These facts and figures indicate that a movement, the growth of OA repositories helps users to find out OA version of journal papers that are otherwise available through commercial channels. But at the same time the exponential growth of OA in distributed manner creates problems in OA retrieval (Sarkar & Mukhopadhyay, 2010).

Open DOAR is an authoritative directory of academic open access repositories. Each Open DOAR repository is visited by project staff to check the information that is provided by the repositories. This in-depth approach does not work-on automated analysis and gives a controlled list of repositories after human evaluation (Wikipedia, 2015).

OpenDOAR provides simple repository list, search for repository or search repository contents. The content search interface of OpenDOAR is supported Google Custom Search Engine (CSE) and thereby ensures the power search features of the search leader of the world. The search repository provides tools and support to both repository administrators and service providers in sharing best practice and improving the quality of the repository infrastructure. Institutional repositories are one of the recommended ways to achieve the open access vision

described in the Budapest Open Access Initiative definition of open access. This is sometimes referred to as the self-archiving or 'green' route to open access (Wikipedia, 2017). Presently, it covers around 3200+ OA repositories with detail information on each of the listed repositories.

This paper is an attempt to analyze current status of OA repositories on BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR propose a model for integration of all OAI/PMH compliant repositories in the domain for end users. BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country are included these countries.

1. Bangladesh
2. Bhutan
3. India
4. Myanmar
5. Nepal
6. Sri Lanka
7. Thailand

Objectives:

In this era, Open DOAR repositories are spreading knowledge day-by-day all over world. As on date OpenDOAR analysis BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country (data as on October 1st, 2020 reported in OpenDOAR). But OpenDOAR is not the only tool in the domain. There are two major tools to identify OA repositories which are OpenDOAR (Directory of Open Access Repositories), ROAR (Registry of Open Access Repository) etc. There are overlaps in these directory services but as OpenDOAR is more comprehensive, this article depends on the datasets as given in OpenDOAR. Analysis all perspective of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country.

The objectives of this study are to diagnose:

- To develop a state-of-the-art report/dataset on open access (particularly Green path) in the particular domain of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country.
- To study OA repositories on BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country through explain different generic parameters.
 1. These are, country wise distribution,
 2. Category wise distribution,
 3. Language wise distribution,
 4. Software wise distribution,
 5. Subject wise distribution,
 6. Content wise distribution
 7. Growth of OpenDOAR (BIMSTEC country) etc and so on.

Discussion and analysis all criteria of BIMSTEC country (as on: 01.10.2020):

No. of Repositories

It is interesting to note that the total no of repositories 150 (100%). Bangladesh contains 14(9.33%) repositories. Bhutan lies 0 repositories', and the percentage is also 0 %. India contains 100(66.66%) repositories. India contains 100(66.66%) repositories. Myanmar contain 2(1.33%). Nepal contains 1(0.66%), Sri Lanka contain 16(10.66%) and Thailand contain 17(11.33%). The largest number of repositories are from India100(66.66%) and the lowest is Nepal 1(0.66%). in Bhutan there is no repositories present.

Table 1: No of Open Access Repositories: Country wise distribution

Sl.No	Country	No of Repositories	Percentage
1	Bangladesh	14	9.33
2	Bhutan	0	0
3	India	100	66.66
4	Myanmar	2	1.33
5	Nepal	1	0.66
6	Sri Lanka	16	10.66
7	Thailand	17	11.33
	Total	150	100

Table 1: Country wise distribution through OpenDOAR

Table 1 is based on the number of repositories are distributed country wise repositories of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. Country wise distribution showing in bar chart which is given below:

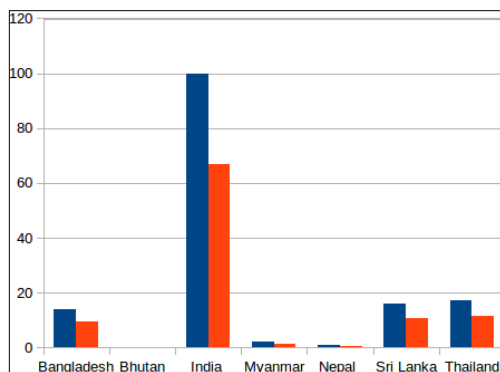


Fig. 1: Distribution of LIS OA Journals by country wise showing in column diagram.

Table 2: Open Access Repositories: Category wise distribution

It is interesting to note that the total no of repositories 145(100%). Bangladesh contains 14(9.33%) repositories. Bhutan lies 0 repositories, and the percentage is also 0 %. India contains 100(66.66%) repositories. India contains 100(66.66%) repositories. Myanmar contain 2(1.33%). Nepal contains 1(0.66%), Sri Lanka contain 16(10.66%) and Thailand contain 17(11.33%). The largest number of repositories are from India100(66.66%) and the lowest is Nepal 1(0.66%). in Bhutan there is no repositories present.

Sl.No	Country	Institutional	Disciplinary	Governmental	Aggregating	Total
1	Bangladesh	13	1	1	0	15
2	Bhutan	0	0	0	0	0
3	India	81	10	1	5	97
4	Myanmar	2	0	1	0	2
5	Nepal	0	1	0	0	1
6	Sri Lanka	16	0	0	0	16
7	Thailand	12	1	1	0	14
	Total Repository	124	13	4	5	145
	Percentage	85.51	8.96	2.75	3.44	100

Table 2: Category wise distribution through OpenDOAR

Table 2 is based on the number of repositories are distributed country wise of OA compatible repositories of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. Country wise distribution showing in bar chart which is given below:

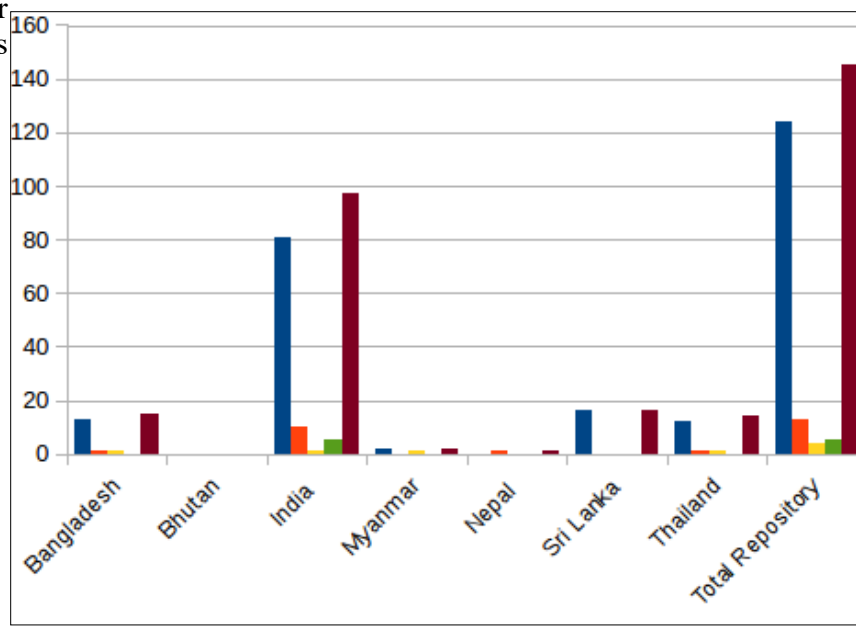


Fig. 2: Distribution of LIS OA Journals by country wise showing in column diagram.

Table 3: Open Access Repositories: Language wise distribution

As expected, the total no of repositories is 180(100%). In these repositories total English language are used 134 in BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. But in India 92 English language are used. It is highest rate of language all over world. After that, the second position of Thai language is total 14. Total Hindi Language are used 9 and it is only used in India. And the lowest number of languages is Arabic, Persian (Farsi), Sanskrit, Kannada language.

Sl.No	Country	English	Hindi	Bengali	Marathi	Malayalam	Gujrati	Arabic	Persian(Farsi)	Sanskrit	Kannada	Tamil	Thai	Sinhalese	Total
1	Bangladesh	14	0	3	0	0	0	0	0	0	0	0	0	0	17
2	Bhutan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	India	92	9	1	2	2	3	1	1	1	1	0	0	0	113
4	Myanmar	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5	Nepal	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6	Sri Lanka	14	0	0	0	0	0	1	0	0	0	2	0	5	22
7	Thailand	11	0	0	0	0	0	0	0	0	0	0	14	0	25
	Total Repository	134	9	4	2	2	3	1	1	1	1	2	14	5	180
	Percentage	74.44	5	2.22	1.11	1.11	1.66	0.55	0.55	0.55	0.55	1.11	7.77	2.77	100

Table 3: No of Language wise distribution of OAI compatible repositories (Green path)

Table 4 is based on the number of repositories are distributed in language wise of OAI compatible repositories of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. Language wise distribution showing in bar chart which is given below:



Fig. 3 : Distribution of LIS OA repositories by Language wise showing in bar diagram

Table 4: Open Access Repositories: Software wise Distribution

As reported earlier discussion, DSpace is the most popular open-source software. In BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories DSpace software is used 93 (69.92%). In India 34 Dspace software are used in different repositories all over India. But in India EPrints used 41 repositories. This is largest number of repositories, EPrints is used in repositories which is (30.82%). After that, Greenstone 5(3.75%), Drupal 1(0.75%), Others 8(6.01%) software are used in repositories.

No. of Country		Name of Software					Total
		DSpace	Eprints	Greenstone	Drupal	Others	
	Bangladesh	13	0	2	0	0	15
	Bhutan	0	0	0	0	0	0
	India	34	41	1	1	5	82
	Myanmar	2	0	0	0	1	3
	Nepal	0	0	0	0	0	0

Sri Lanka	15	0	0	0	1	16
Thailand	16	0	0	0	1	17
Total Software	93	41	5	1	8	133
Percentage	69.92	30.82	3.75	0.75	6.01	100

Table 4 : No of Software wise distribution Of OAI compatible repositories(Green path)

Table 4 is based on the number of repositories are distributed in Software wise repositories of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. Software name wise distribution showing in bar chart which is given below:

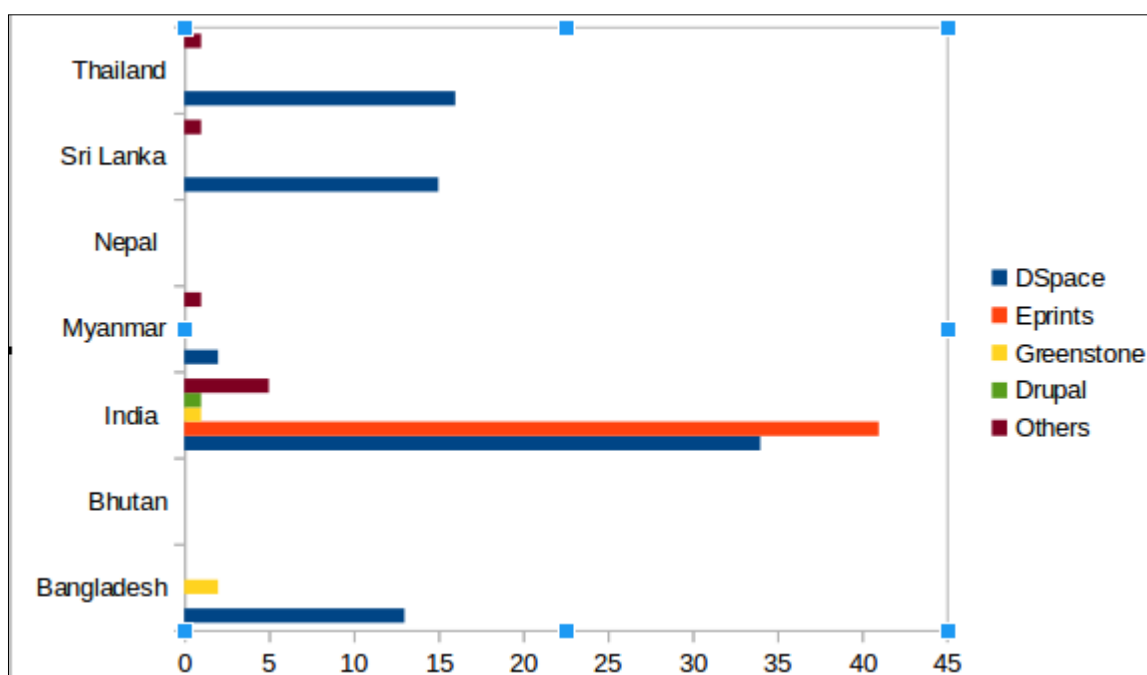


Fig. 4: Distribution of LIS OA repositories by Software wise showing in bar chart

Table 5: Open Access Repositories: Subject wise distribution

It is interesting to note that the total no of repositories 145(100%). Bangladesh contains 14(9.33%) repositories. Bhutan lies 0 repositories, and the percentage is also 0 %. India contains 100(66.66%) repositories. India contains 100(66.66%) repositories. Myanmar contain 2(1.33%). Nepal contains 1(0.66%), Sri Lanka contain 16(10.66%) and Thailand contain 17(11.33%). The largest number of repositories are from India 100(66.66%) and the lowest is Nepal 1(0.66%). in Bhutan there is no repositories present.

Subjects	Nepal	Thailand	India	Sri Lanka	Bangladesh	Bhutan	Myanmar	Total
Agriculture, Food and Veterinary	1	2	9	4	2	0	0	18
Multidisciplinary	1	10	41	8	10	0	2	72
Business & Economic	0	0	2	1	3	0	0	6
Computer & IT	0	0	6	1	1	0	0	8
Arts & Humanities General	0	0	2	2	1	0	0	5
Language & Literature	0	0	1	0	1	0	0	2
Library and Information Science	0	0	6	0	2	0	0	8
Technology General	0	0	11	0	0	0	0	11
Architecture	0	0	1	0	0	0	0	1
Electrical & Electronic Engg	0	0	5	0	2	0	0	7
Social Science General	0	1	3	0	0	0	0	3
Education	1	1	1	0	0	0	1	4
Law & Politics	1	0	1	0	2	0	0	4
Management & Planning	0	0	2	0	2	0	0	4
Mechanical Engg & Materials	0	0	3	0	1	0	0	4
Ecology & Environment	0	1	5	2	0	0	0	8
Earth & Planetary Science	0	0	3	0	0	0	0	3
Civil Engg	0	0	5	0	1	0	0	6
Psychology	0	0	1	0	0	0	0	1
Geography & regional Studies	0	0	0	0	0	0	0	0
History & Archeology	0	0	0	1	1	0	0	2
Philosophy & Region	1	1	0	1	0	0	0	3
Biology & Bio-Chemesrty	0	0	9	0	1	0	0	10
Math & Statistics	0	0	4	0	0	0	0	4

Chemistry & Chemical Technology	0	0	11	0	0	0	0	11
Physics & Astronomy	0	0	7	0	0	0	0	7
Mechanical Engg & Materials	0	0	3	0	0	0	0	3
Health & Medicine	0	2	11	0	2	0	0	13
Science General	0	0	9	1	0	0	0	10
Total Subject	5	18	162	21	32	0	3	241
Percentage	2.07	7.46	67.21	8.71	13.27	0	1.24	100

Table 5: Subject wise distribution in Open Access repositories

Table 5 is based on the number of repositories are distributed in Software wise repositories of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. Software name wise distribution showing in bar chart which is given below:

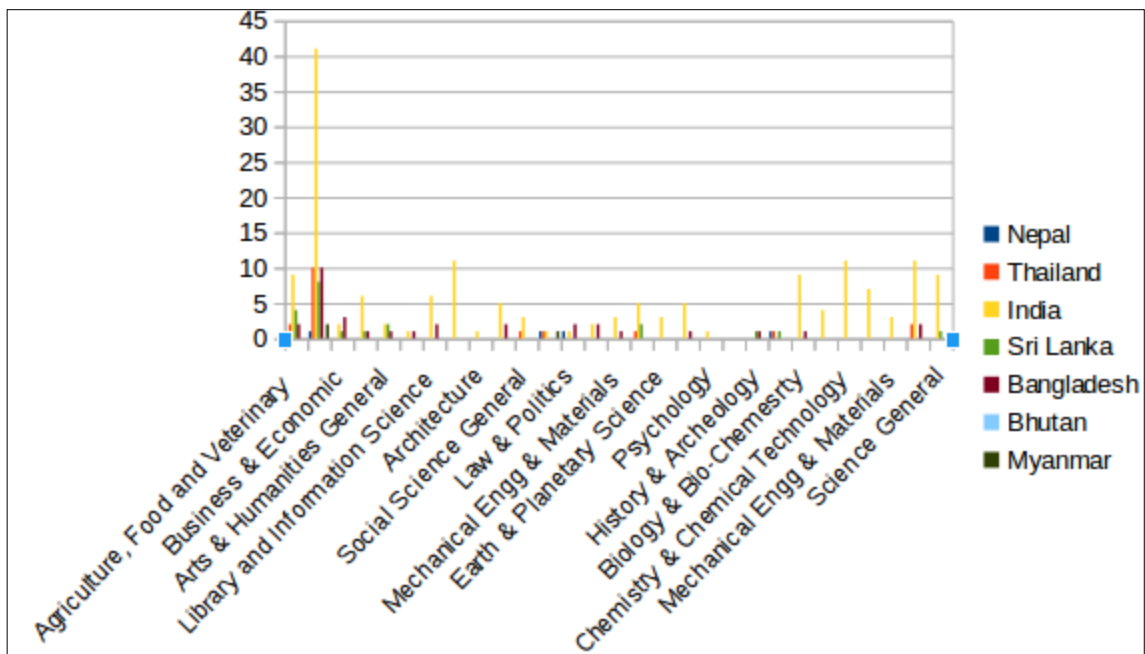


Fig. 7 : Distribution of LIS OA repositories by Software wise showing in column chart

Table 6: Open Access Repositories: Content wise distribution

It is interesting to note that the total no of repositories 465(100%) in BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. Bangladesh contains 47(10.10%) repositories. Bhutan lies 0 repositories, and the

percentage is also 0 %. India contains 100(66.66%) repositories. India contains 100(66.66%) repositories. Myanmar contain 2(1.33%). Nepal contains 1(0.66%), Sri Lanka contain 16(10.66%) and Thailand contain 17(11.33%). The largest number of repositories are from India100(66.66%) and the lowest is Nepal 1(0.66%). in Bhutan there is no repositories present.

Subject	Nepal	Thailand	India	Sri Lanka	Bangladesh	Bhutan	Myanmar	Total
Books and Chapters and Sections	0	8	35	11	4	0	0	58
Journal Articles	0	13	70	13	10	0	3	109
Dataset	0	0	3	0	0	0	0	3
Learning Objects	0	3	19	2	2	0	0	26
Multimedia	0	0	0	0	0	0	0	0
Patents	0	0	6	0	0	0	0	6
Special	0	0	0	0	0	0	0	0
Theses and Dissertation	0	9	52	8	10	0	2	81
Unpublished	0	0	0	0	0	0	0	0
Bibliographic References	0	4	14	3	1	0	0	22
Reports and Working Papers	0	9	28	5	9	0	0	51
Other Special item types	1	8	31	0	6	0	0	45
Conference and Workshop Papers	0	9	47	7	5	0	0	68
Total Subject Repository	1	63	305	49	47	0	5	465
Percentage	0.21	13.54	65.59	10.53	10.10	0	1.07	100

Table 5: Subject wise distribution in Open Access repositories

Table 5 is based on the number of repositories are distributed in Software name wise repositories of BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories. Content wise distribution showing in column chart which is given below:

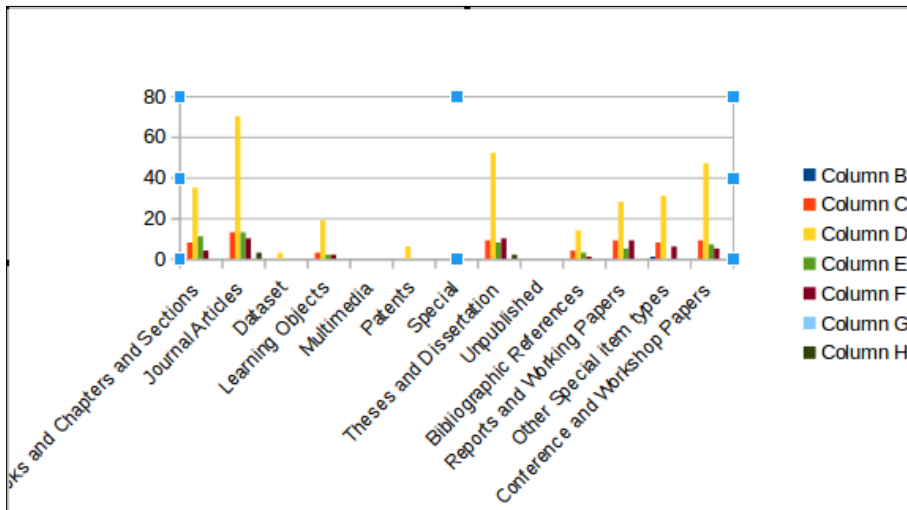
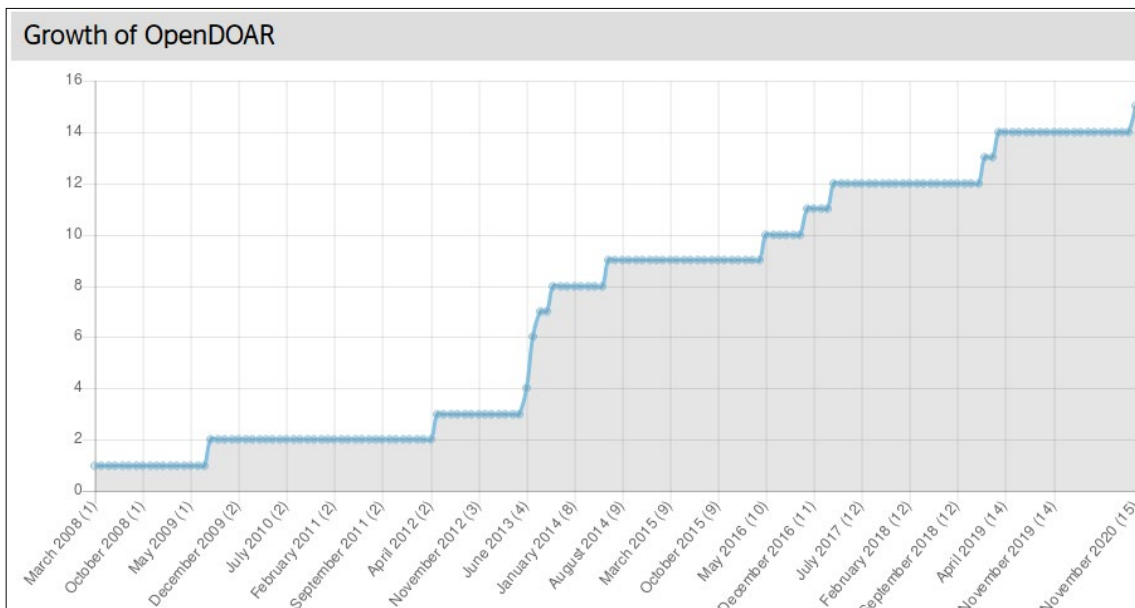


Fig. 5 : Distribution of LIS OA repositories by Software wise showing in colour chart

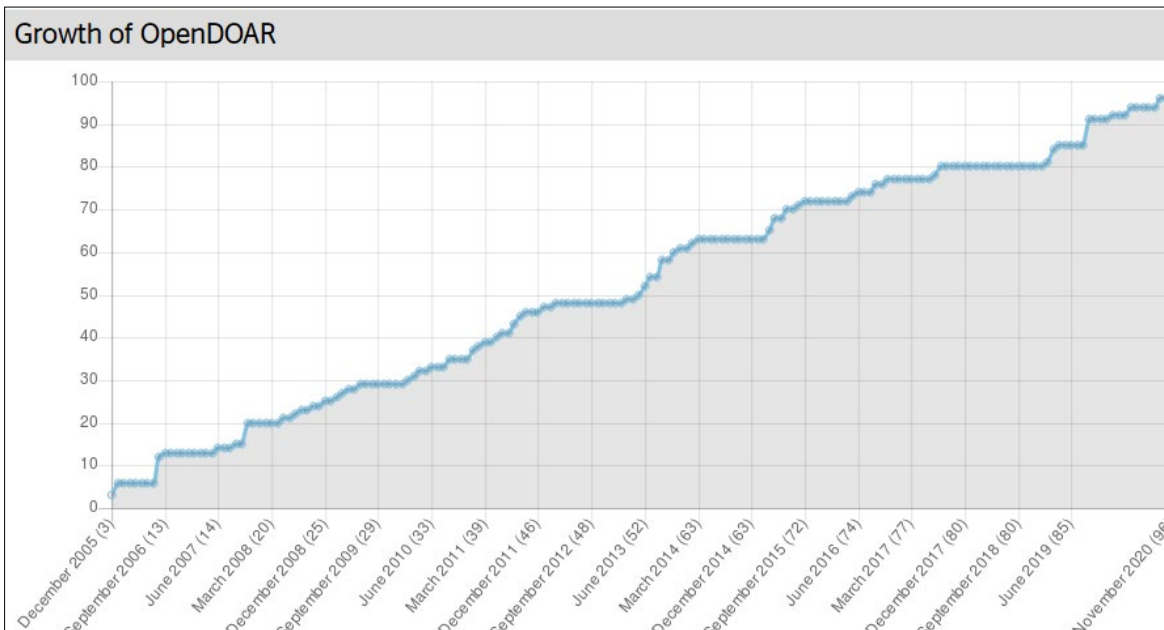
Table 7: Growth of OpenDOAR

Bangladesh showing growth of OpenDOAR.



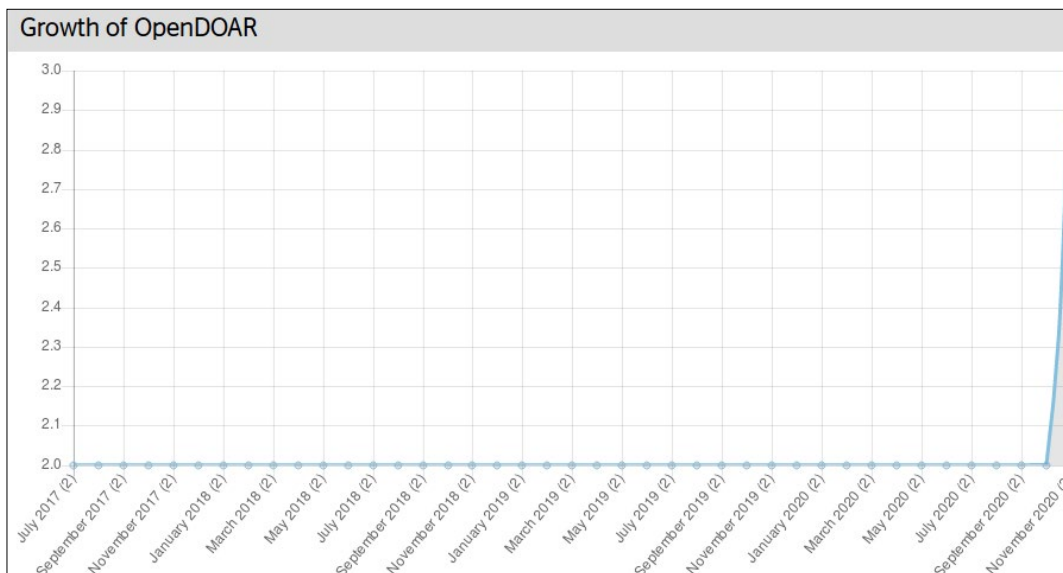
In 2008 Bangladesh contain 1 repository and after long time the growth of OpenDOAR repositories is now 15, as on 01.10.2020.

India showing growth of OpenDOAR.



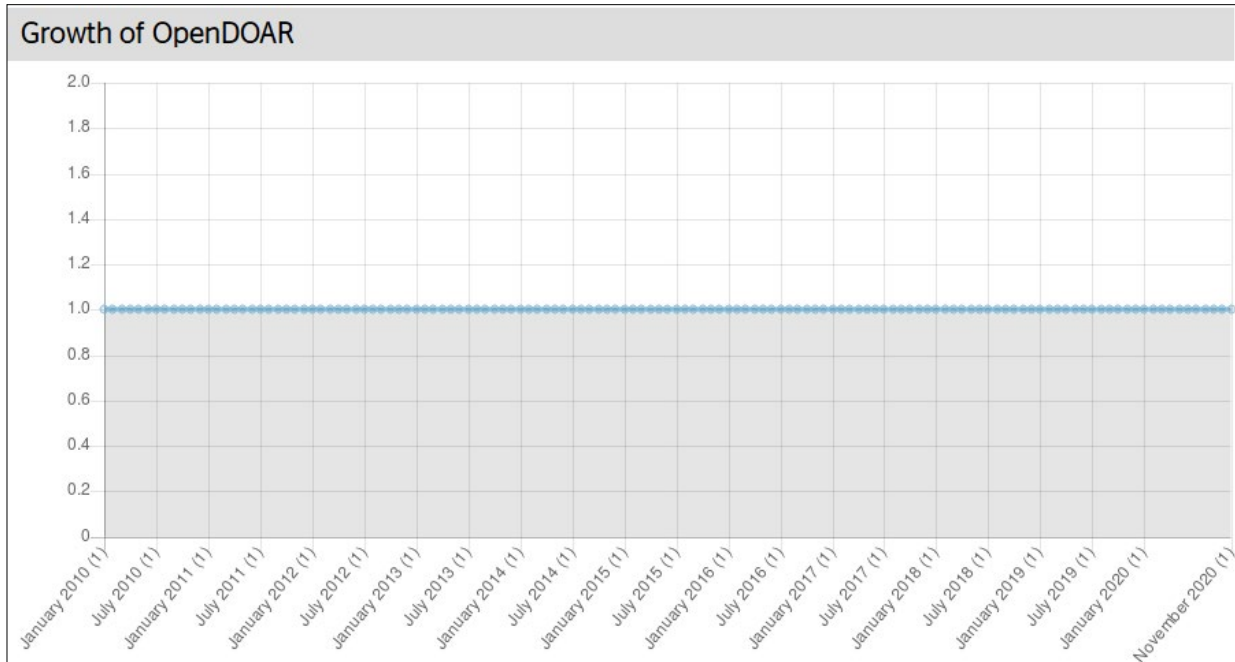
In 2005 India contain 3 repositories and after long time the growth of OpenDOAR repositories is now 100, as on 01.10.2020. That is highest repository continent in the BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country in OpenDOAR OA Repositories

Myanmar showing growth of OpenDOAR



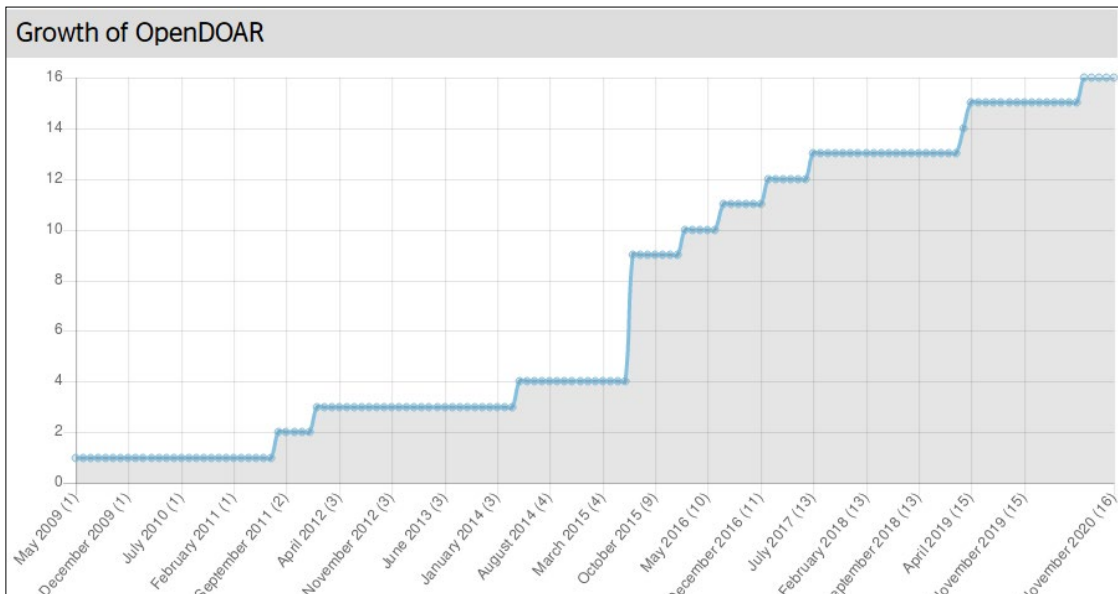
In 2017 Myanmar contain 2 repositories and after long time the growth of OpenDOAR repositories is now 3 in, as on 01.10.2020.

Nepal showing growth of OpenDOAR.



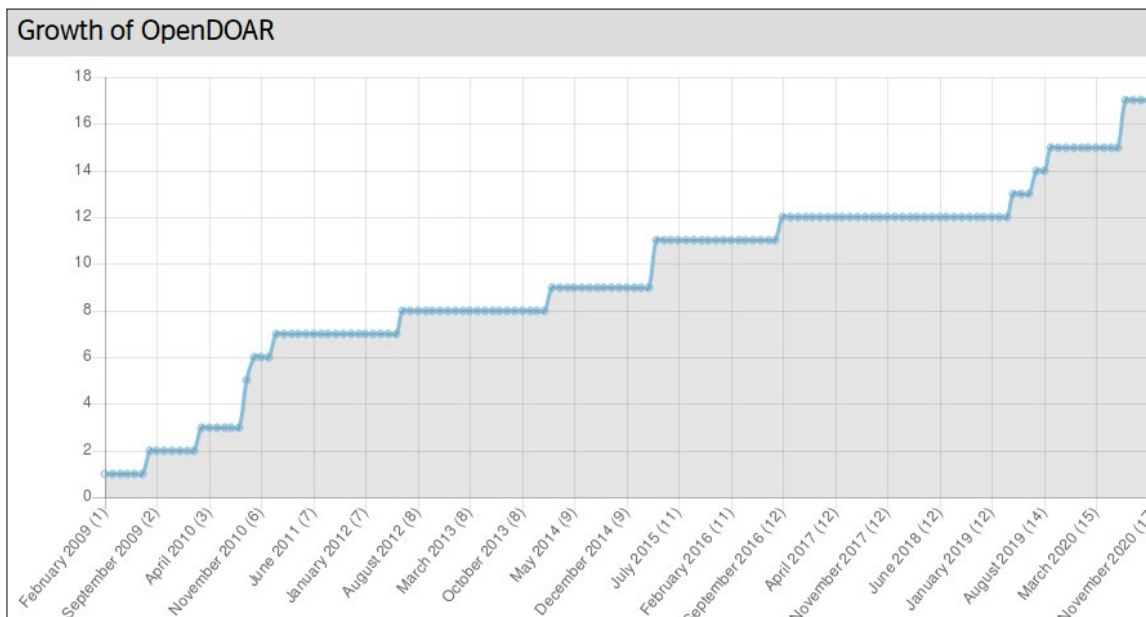
In 2010 Bhutan contain 1 repository and after long time the growth of OpenDOAR repositories is now 1 in, as on 01.10.2020. The number of repositories is not changeable.

Sri Lanka showing growth of OpenDOAR.



In 2009 Sri Lanka contain 1 repository and after long time the growth of OpenDOAR repositories is now 16, as on 01.10.2020.

Thailand showing growth of OpenDOAR



In 2009 Thailand contain 1 repository and after long time the growth of OpenDOAR repositories is now 17, as on 01.10.2020. The huge growth rate is shown in this country.

Conclusion: Currently, Open Access is playing a big function to pave the path of an alternative scholarly communication system in place of or in addition to the traditional value based scholarly communication process. In BIMSTEC (Bay of Bengal Initiative for Multi-Sectional Technical Economic Co-operation) country, India has largest no of repositories through Open DOAR. Total number of repositories is 100 in India. In Bhutan there is no repositories till date. The Green Open Access repositories are used research in public domain freely and instantly is becoming a reality day-by-day. This paper demonstrates the possibility in contain of BIMSTEC countries. It shows the global trend of opening research results speedily. Category wise institutional repositories are high in number and governmental repositories are low in number. Most of the English language are used in repositories. DSpace software are used in most of the repositories. Subject wise multidisciplinary content are used in repositories. Content wise journal article are used in these repositories. Bhutan has no any other repositories to spread high quality of knowledge.

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