## Is India lax in its e-journals preservation efforts?

Today, electronic journals (e-journals) reign supreme in the scholarly communication landscape. In the print journals era gone by, libraries owned the print journals subscribed by them. Consequently, it is still possible to retrieve an article from the journal held by a library, however distantly located. This is irrespective of a print journal having been discontinued by the publisher or closure of the journal publishing house itself.

In the e-journals world however, there is a definite shift from ownership to access. Libraries that supposedly have large 'digital journal collections' are actually licensing 'digital journal connections', paying large sums of money. Unlike the print era, the digital journals continue to be owned by the publisher and the libraries merely have access to the publisher owned e-journals. Such accesses are governed by publisher-biased license agreements<sup>1</sup> signed between the publishers and the libraries, or increasingly through consortia arrangements

One of the clauses in the publisherlibrary license agreements is the postcancellation clause (PCA) that is meant to assure continued access to the e-journals belonging to the years it was licensed, even after discontinuation or cancellation of the e-journals by the library. Also known as the post-termination access (PTA) clause, it gives libraries a sense of security. But this can be short lived. Very few librarians would confidently agree that the post-cancellation or posttermination clauses in the licenses will actually ensure access to the journals forever because access is invariably provided via the publishers' platform which may be discontinued for several reasons. Occurences in the journal publishing industry such as journal title transfers, title changes or mergers, publishers closing shop, take overs, etc., could affect the sanctity of the license agreements. In the dynamic publishing environment of today, it is doubtful if publishers will actually maintain library entitlement records indefinitely, that raises rightful concerns about the perpetuity of the license clause itself. The bottomline is that post-cancellation or post-termination access today, is more of a licensing issue than a technological solution.

To ensure e-journals access for posterity, e-journals preservation as a technological solution is more pragmatic than the licensing approaches which we are presently relying on. The need for ejournals preservation has been argued in great detail and there are worldwide efforts to preserve e-journals and thereby scholarship<sup>2</sup>. It involves digitally preserving the e-journal content at nonpublisher sites so that if access to the licensed journals from the publishers' platform becomes unavailable for predetermined reasons (trigger events), the library and its end users will get access to the journals from the non-publisher platforms. Trigger events include a publisher ceasing operations and titles no longer being available from any other source, back issues of a journal being removed and are not available or failure by the publisher's delivery platform for a sustained period of time, etc.

The Keepers Registry, developed and maintained by EDINA, University of Edinburgh, UK acts as a global monitor on the preservation arrangements for e-journals. The Registry maintains information about worldwide e-journals preservation efforts and presently, there are 12 initiatives listed in the registry that include web-scale not-for-profit archiving agencies, national libraries and library consortia involved in e-journals preservation<sup>3</sup>.

In India, there are a dozen consortia operated under umbrella institutions such as CSIR and DST<sup>4</sup>, UGC<sup>5</sup>, ICAR<sup>6</sup>, DRDO, DAE and so on. The consortia collectively license thousands of e-journals for their institutions. But, very little is being done with regard to archiving and long-term preservation of the large number of e-journals that the consortia license year after year. Based on the initiatives identified in the Keepers Registry, the following approaches to e-journals preservation can be pursued in India.

Third party services are services that are akin to an insurance cover for ensuring perpetual access to e-journals. Two major services are Portico and CLOCKSS. These services have arrangements with the publishers to archive their journals and in case of a trigger event disrupting access from the publisher website, the libraries that have

a Portico or CLOCKSS cover would get uninterrupted access to the nonaccessible journals in the Portico or CLOCKSS reserves.

Portico, set-up in 2002, currently has 980 participating libraries and 291 ejournal publishers from around the world taking part in its preservation programmes<sup>7</sup>. According to data in the Keepers Registry, presently there are just two libraries from India - Indira Gandhi Institute of Development Research, and National Centre for Biological Sciences (TIFR Centre) participating in the Portico's digital preservation strategies<sup>3</sup>. And again according to records in the Keepers Registry, there are just three institutions from India - the Indian Institute of Management at Ahmedabad, Kolkata and Kozhikode - participating in CLOCKSS<sup>8</sup>.

The absence of apparent immediate benefits during a subscription year could be a reason that the two well known third party services have found very limited uptake in India. However, libraries and consortia would augur well to pay a token annual 'insurance' so that there is a fall back mechanism that will assure access to their licensed content in case of an eventuality at the publisher's end.

The National Science Library of China, British Library, and the Library of Congress, USA have taken upon themselves the responsibility to create e-journal archives at the national level. Agreements between the national libraries and publishers form the basis for the preservation where trigger events are also identified.

Further, many countries have mandated that electronic publications of their country have to be deposited in their respective national libraries. This is yet to happen in India. Even publishers amenability to the longstanding Delivery of Books and Newspapers (Public Libraries) Act, 1954 that requires Indian publishers to deposit a copy of the print books or periodicals published by them to the depository library is not being strictly followed by all the publishers<sup>9</sup>. As for digital content preservation, we do have the National Digital Preservation Programme<sup>10</sup> and there is also the more recent IIT Kharagpur coordinated MHRD initiative in creating a National

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Digital Library<sup>11</sup>. However, at the moment, these do not seem to take into account the much needed cause of e-journals digital preservation.

The consortia approach to licensing e-journals has almost become a norm the worldover. Although there have been reports about consortia being enticed with 'big deals' to largely benefit the publishers, the advantages of consortia licensing in lowering prices and provisioning additional content cannot be overlooked. However, it is about time that consortia go beyond licensing e-journals and also look at long-term preservation of the e-journals that they license<sup>12</sup>.

In India, without a national digital preservation policy in place<sup>13</sup>, institutions including libraries seem to be groping in the dark. For ensuring continued availability tomorrow to what we have access today, steps need to be taken for

preservation of the electronic journals. Indian institutions should begin pursuing suitable digital preservation approaches which should have the backing of a digital preservation policy thus ensuring a vibrant digital preservation ecosystem in the country for assuring posterity to the digital scholarship.

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G. Mahesh

CSIR-National Institute of Science Communication and Information Resources,

14-Satsang Vihar Marg, New Delhi 110 067, India Currently Commonwealth Fellow at

EDINA, University of Edinburgh, UK e-mail: gmahesh@niscair.res.in

## Rich biodiversity of River Kulsi

River Kulsi, a southern tributary of the Brahmaputra, is considered as one of the last refuges of the endangered Gangetic dolphin (*Platanista gangetica gangetica*) in Assam. Wakid and Braulik<sup>1</sup> have reported a total of 29 dolphin individuals. The presence of a top carnivore and an indicator species like the dolphin, not only indicates the significance of the river, but also presents a picture of the healthy freshwater ecosystem. Dolphin is to a river, as tiger is to a forest. And indeed it is true in case of Kulsi.

Recent studies report the richness of fish and aquatic invertebrate fauna in the Kulsi. Goswami and Ali<sup>2</sup> reported the presence of 63 fish species belonging to 8 orders and 21 families. Of these, six are exotic and the rest are indigenous having ornamental and economic value. Islam *et al.*<sup>3</sup> reported the presence of five crustacean species. Kulsi also supports rich and varied semi-aquatic macrophytes distributed along its banks; they exhibit a heterogeneous assemblage. Heavy rainfall, high humidity, and mod-

erate to high temperature primarily influence the profuse development of semiaquatic macrophyte, *Ipomoea carnea* ssp. fistulosa during the monsoon and early autumn seasons. Geographically, Kulsi originates in the Meghalaya (25°38'N, 91°38'E) and enters Assam after travelling about 12 km from its place of origin. It finally discharges into the main Brahmaputra at Nagarbera. It is surrounded by a number of wetlands, among which Chandubi, Solbeel and Beeldora play a pivotal role in providing a healthy prey base for the Gangetic dolphin. Kulsi is also fed by tributaries, namely, Botha, Kharkhari, Boko, Singra and other streams. Therefore the river is characterized by structural complexity.

There are 25 villages along the entire course of Kulsi. Seventy per cent of the people depend on river water for their daily needs, fishing, sand mining, cattle bathing, recreation, etc. It is indeed a life-giving river with rich biodiversity. However, at present Kulsi is facing serious threats in the form of sand mining.

overfishing, uncontrolled motorboat traffic, river-bank erosion, construction of dam, etc. Proper planning, further research and awareness activities are necessary to sustain the ecology of the river.

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Shah Nawaz Jelil

Division of Wildlife Management and Biodiversity Conservation, ENVIRON, 60, LNB Road, Hatigaon, Guwahati 781 006, India e-mail: shahnawazjelil@gmail.com