Connecting Africa: Repository Service. Africa Studies Centre, Leiden, the Netherlands

A portal for Africanists: publications and experts unite – increasing global visibility of Africanist research

http://www.connecting-africa.net

Background

The Connecting Africa (CA) service was conceived in 2003 under the maiden name of DARC, a SURF-funded project. This was followed up in the form of the DARC2 Project in 2004, making much of what it is today.

Connecting Africa is a service containing global information for Africanists run by the African Studies Centre (ASC) in the Netherlands. This is “an independent scientific institute that undertakes social-science research on Africa and aims to promote a better understanding and insight into historical, current and future social developments in sub-Saharan Africa….” “…promoting the dissemination of knowledge and an understanding of African societies …” The ASC’s mission and Director’s support was crucial for both the establishment and continuation of CA.

The ASC sees itself as the spider in the web of Africanist research, supporting such research in the Netherlands and abroad. It was therefore the ASC who initiated the service reinforcing its broker function by building a digital platform on Africanist expertise and publications for researchers and students alike. A Project Board containing both scientific and library staff governed both DARC projects. The ASC has been setting up a committee to structurally govern CA and its future initiatives. DARC was developed in parallel to the Leiden University Institutional Repository (IR). CRIS and IR challenges at Leiden and the ASC were targeted and worked out together early on. This consequently accelerated the development of Leiden’s IR and its content. The subject-specific service model of CA was also utilised to advocate the use of IRs for subject communities to both Leiden and other DARC partners.

As regards networking and knowledge exchange CA and ASC, see this is one of their core missions. This is reflected in a number of activities such as collaboration with key networks such as AEGIS (Africa-Europe Group for Interdisciplinary Studies) as well as with CODESRIA. CODESRIA is a strategic partner in Senegal, Africa, and collaborates with the ASC on library and documentation issues. It also brings Africanists worldwide together by organising international conferences for example.

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1 This case study write-up was executed as part of the Stimulating the Population of Repositories research project which was carried out as part of the European DRIVER project. It was conducted in 2006 and 2007. See http://dare.uva.nl/aup/nl/record/260224 for the publication.
2 The SURF Foundation is a funding agency and partnership organisation which serves all Dutch higher education institutions by developing network services and information and communications technology (the JISC or DfG are equivalents). http://www.surf.nl/en/Pages/home.aspx
3 The African Studies Centre: http://www.ascleiden.nl/
4 idem
5 The ASC, as DARC’s leader, is an independent institution and is not affiliated to the university, financed by three Dutch ministries. However, there is a common understanding to work together with Leiden University on information projects.
6 AEGIS - Africa-Europe Group for Interdisciplinary Studies: http://www.aegis-eu.org/
7 CODESRIA - Council for the Development of Social Science Research in Africa: http://www.codesria.org/
CA intends on further expanding on its global content by submitting calls to national and EU funding programmes. It sees the DRIVER Project as increasing its visibility on the one hand, and hopes to use DRIVER’s content for the acquisition of new material for its own service on the other.

**Policy**

Connecting Africa harvests the majority of its content from repositories containing Africanist content located at decentralised locations as Africanist material is often dispersed across Schools and academic Departments. It harvests all data and then selects relevant content for its service by filtering using special terms. CA made it policy to only aggregate content which comes from the institution, i.e. an IR. In the case that experts are interested in including their work, they are advised to deposit in their own IR, with CA then harvesting the IR. There are no facilities to serve authors with no IRs at present, nor are these planned. The CA service includes traditional academic output such as journal articles, books and chapters as well as music and images. Local repository policy decisions strongly influence the type and amount of content provided by the repositories feeding Connecting Africa.

The establishment of CA has been an important stimulus for the development of the ASC internal research deposit policy confirms Ursula Oberst, DARC Project Officer. It has been since 2007 that all researchers have been obliged to submit the academic output to the local IR. This mandate idea was publicised to ASC researchers in 2006, which has proved relatively successful with about 50% of its authors contributing that year. However, the Director wants complete coverage, and is even considering sanctions for those who do not submit.

**Establishing the service, and sustainability**

*DARC* had four months to set up the infrastructure and work processes for the delivery of management information and full text of the ASC’s academic output in 2003 and for establishing the basic Connecting Africa portal. CA was initiated to deal with the ASC’s bottlenecks in organising, archiving and making its own academic output available; its service and aims grew from there.

The key initial problem CA addressed was to increase efficiency in the publication work process of the researcher at the ASC. Work processes were analysed and reorganised from the start. The ASC did not establish an IR, but stored the material on a server which was then harvested by the Leiden IR. Depositing material once into the system and disseminating it to various channels meant less administration for the researcher and a better chance of the ASC acquiring information on the output of its researchers. This was forward-thinking in the Netherlands where most Institutional Repositories (IRs) addressed this after aggregating content for its IR through projects such as Cream of Science..

The CA web portal [http://www.connecting-africa.net](http://www.connecting-africa.net) was then developed to showcase ASC and partner expertise and publication output. A professional web-designer was hired to develop it. As a first step, the existing PRISMA database of Africanist experts was integrated into the system and portal to provide a window on Dutch Africanists. One of its main functions was to build on the existing Africanist network bringing disparate experts together by visualising them and making them searchable by topic. The portal allows users to search for experts and publications by topic for
example. Researchers can create personal profiles and find compatriots. Once this pilot showcase was in place, the next plans were set to encourage others to contribute. 

**DARC2** involved other partner institutions with strengths in African Studies in the Netherlands. It aimed to gain a critical mass of Africanist material produced in the Netherlands. The CA service was developed and seen as a stimulus to populate Dutch IRs in general. Its aim was to obtain content from 25% of all Africanists in the Netherlands, but doubled its target achieving 52% partly due to the Cream of Science, which ran in parallel and involved Africanists. DARC2 later opened up to aggregate further content from Europe and Africa.

DARC made a conscious effort to involve the future information providers and users in the design of CA. At the end of DARC (1), project participants talked with a number of researchers from six Dutch universities about ideas for the future, which formed the basis of DARC2. For example, researchers proposed that participants of the national research Masters programme in African Studies would be encouraged to base course material on research material contained in DARC, where CA would provide course content via their site. This then went on to form part of DARC2.

With the portal in place, outreach activities invited researchers to participate in CA more actively once the pilot had been tested. This resulted in material being delivered to partner IRs, by authors or libraries on their behalf and by making some publications newly digitally available through retro-digitisation. In DARC2 Reference Manager was used for data entry by the ASC and then exported to Leiden’s DSpace IR.

DARC2 then built an OAI-PMH harvester as well as its Post-harvest analyser, which was also made available open source to share with the OA community. This was designed to allow the ingestion of material from IRs, capturing all content, and then filtering that content based on Africanist terms of reference such as Peoples, languages, countries.

**Services**

A number of further incentives, i.e. services, were provided which were there to encourage author participation through DARC2. Since DARC’s infrastructure and web interface was in place, DARC2 wanted to concentrate on further populating the service and it developed more services to stimulate this. Apart from further showcasing more work from the Africanist community, and making their work more globally accessible, DARC2 also developed a mechanism to produce standardised and automated publication lists. These were then connecting to the experts in the system and any related content in partner IRs.

DARC2 also improved on its search interface by making all fields searchable, e.g. experts, thematic and geographic expertise, etc. In addition, mechanisms to attract returning CA users on the first page were added, e.g. a most recent publication feature and a pick of the month resource selected by the digital librarian of the ASC. Later, the ASC also stored the life’s work of ASC depositors on a CD-Rom and delivered these to its researchers. This also stimulated more researchers to deposit.

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9 Search for experts via CA: [http://www.connecting-africa.net/Search/Default.aspx](http://www.connecting-africa.net/Search/Default.aspx)
10 The universities of Wageningen, Leiden, Amsterdam and Groningen covered more than 50% of Africanistics research in the country.
11 Cream of Science: [http://www.creamofscience.org/](http://www.creamofscience.org/)
Interoperability issues which have proven a challenge are picking up synonyms through the post-harvester which are of no direct relevance, e.g. people names in Asia. Although all DARC partners used Dublin Core, not all used the same fields for the same purposes. Challenges in connecting authors with the right research data in CA is also still an issue although DARC was well underway in creating an author ID registry for its Africanists being stopped in its tracks due to a national DAI project.\[^{12}\]

As far as usage of the services is concerned, Dutch Africanists seem to support making their work more visible and accessible in Africa for example, and agree with the principles of open access in the main, profiling themselves and their work. This means that IRs are becoming populated with their work. However, Dutch researchers do not seem to utilise the CA search service as much as third world ones do says the CA team. This is a common challenge for new information services.

Titia Van der Werf, former head of the ASC Library, Documentation and Information Department, and former DARC Project Manager, is hopeful and ambitious, “This is the future digital library for African Studies.” For the future, extending the network of experts, and identifying activities for collaboratories bringing new knowledge exchange and information to the Africanist community is of a high priority. The ASC would like to relate the Uppsala international expertise database “Africanists in the Nordic Countries” to that of the CA for content expansion here in the future. Furthermore, on the invitation of the Ministry of Foreign Affairs, CA will now look at aggregating content from policy makers, NGOs and journalists thereby bringing policy and research closer together for the Global Connections Project.\[^{13}\] In addition, CA will extend its content to include more Dutch and Belgian Africanists and their work from NGOs and smaller research institutions. It has also been identified as a good model to create geographical networks for Global Connections where research in South America, Asia and well as Africa will be profiled in a similar way.

Costs and Sustainability

CA has been based on project-funding from SURF for DARC & DARC2. DARC project costs were €89,118, of which, €79,118 were personnel costs (FTEs: 0.2 Project manager, 0.35 documentalist, 0.33 programmer, PR 0.04 and 0.1 researcher time). €5,000 was spent on advocacy material. DARC2 project costs amounted to €142,800, of which, €116,207 were personnel (stepping up project management to 0.25 FTE, programming 0.2 FTE and documentalist work 0.5 FTE). €12,700 was spent on advocacy material and related activities.

General maintenance costs of Connecting Africa amount to Library Director 0.05 fte, 1 documentalist 0.05 FTE, admin staff for the experts dbase 0.05 fte and 0.05 fte of an IT programmer. 630 euros are spent on server and domain costs.

As regards sustainability, the ASC is committed to seeing CA sustained by its Library, Documentation and Information Department making it part of its annual work and strategic plan for 2005-8.

CA has come a long way since its original aim, and it has ambitious plans for the future. For future development and content acquisition covering new scopes however,

\[^{12}\] Digital Author Identifier (DAI)
project money will be needed once again. It therefore intends on working more formally on a more European level seeking EU project funding.

**Populating the service**

The main overall aim of CA was to facilitate access to African studies material worldwide. In addition, it should bring together dispersed Africanists via a virtual platform to extend and maximise networking between Africanists in the Netherlands and abroad.

A subject-specific portal such as CA was used as a stimulant to aggregate publications from ASC researchers and to populate the Leiden IR and later other IRs. However, researchers were not encouraged to participate by delivering content too early on in the DARC project. A depositing infrastructure which supported them in their work processes was the first step. It was therefore mainly the library which aggregated content on its authors’ behalf in DARC (1).

Once the pilot system was running, a campaign was ready to involve more researchers in contributing content to the service through DARC2. For example, in early 2004, 350 researchers were mailed to ask if their professional profiles for the expertise part of the service could be included. About 50% replied promptly, agreeing to do so. In 2006, just over 1,000 full texts were acquired from Dutch DARC2 partner organisations.

CA harvests from Dutch DARC project partners twice per month even after the end of the project in 2006. The opportunities that OA and OAI-PMH brought with it, and the interest by both the ASC and other Africanists to share their material world-wide, means that CA harvests from significant Africanist European sources such as the working papers of a number of AEGIS institutions (such as the University of Mainz and the University of Bayreuth), as well as from Africa. As of 29 January 2006, CA acquires its content by harvesting from 44 institutional repositories, aggregating 12,860 metadata records, with 10,799 objects, including mainly full text files, images and audio files.

The key reasons for researchers contributing to the service to date have been an affinity to the ASC international network, making their expertise and research more widely available to the African continent, acquiring an automated complete publication list and creating digital copies of material not previously online.

Collection development for the service is therefore entirely dependent on the IRs and more importantly on the workflows and depositing infrastructure available, which is only now coming to real fruition amongst DARC2 partners. Since CA was developed in parallel to both the establishment of IRs and later also to the Cream of Science, it is only now that a number of DARC partners are optimising their workflows and depositing mechanisms whilst embedding their IRs into their organisations. CA hopes that this will achieve more content deployment.

Libraries can indeed support the researcher in the first stages to obtain start-up content by depositing on the researcher’s behalf and retro-digitising material. However, for future sustainability, and for the aggregation of new material as and when it appears, work processes need to be clear and in place for this to become the part of the daily working practise of the researcher. The connection to a CRIS or similar system is therefore optimal. The material in all DARC partner organisations is now coupled
with their CRIS information systems. This is an advantage, thus further guaranteeing access to new material (at least the metadata) in the Netherlands.

CA aggregates journal articles, books, chapters, proceedings, working papers, theses, dissertations, images, audio and video files. It harvests metadata and full text, dependent on the policies and resulting content of the source IRs. Material can be retrieved in English, French, Dutch, Spanish, German, Norwegian and Swedish.

Accessibility to research at the ASC has visibly increased in so far that ASC library services, as well as other CA contributors’ collections, were often only available as walk-in libraries years ago. CA now provides much information online be it metadata or full text giving access to over 12,000 bibliographic references and over 10,000 objects (mainly text and image files). CA would like to see its content appear in national research systems such as NARCIS as well as international ones such as DRIVER for more visibility.

The “snow-ball method” : populating CA the ASC and Leiden repository way

The ASC and Leiden University, invented their so-called “snowball method” to attract its authors to the CA service. As part of DARC2, running in parallel to the Cream of Science, the ASC took advantage of the champion concept by inviting leading Africanists to participate. These researchers were then asked to select four further colleagues to participate, as were these four asked to bring a further four. This was not only introduced to better guarantee quality content and take-up by the researchers, but also for project management purposes as a means of phasing retro-digitisation and researcher library support. This method has since been extended for Leiden as a whole and has worked for the Faculty of Arts in particular. It has also been adopted by Wageningen University.

STATISTICS

ASC researcher take-up: 30% of all academic staff contributed to the IR in 2005.

Total records and by type: As of 23 January 2007 12,863 metadata records, with 10,767 object files including 1067 articles (10%), 184 dissertations (2%), 177 books, 94 working papers, 96 theses, 127 chapters, 3 conference proceedings, 152 conference contributions, 0 teaching and learning materials, and 8927 other materials (of which 7,807 images). 27 % are full text files, 72.5 % images and 0.5 % audio files.

Number of experts contributing

As of 3 December 2007, Connecting-Africa consists of 672 experts of whom 63.1% are researchers, 5.4 % policy makers and embassy staff, 19.2% are affiliated to development organizations and other NGOs, 3.9% are independent consultants and 7.7% belong to other groups (the media, students, etc.) through collaboration on the Global Connections Project.


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15 Images and photographs are classed as valuable academic output to Africanists for ethnological studies and cultural anthropology.
Statistics are an indication only as they are determined by dc:format and dc:type, fields which are neither always filled in nor in a consistent manner. For more information, see http://www.connecting-africa.net/statistics/

Within the ASC, there is a steady growth of bibliographic references and full text content; with the mandate hoping to achieve the 100%. Nine of Leiden University IR’s top twenty most downloaded documents come from ASC/CA researchers.

Communication / advocacy

Connecting Africa has given significant attention to advocacy activities although Oberst, Project Officer, sees that more work needs to be done. It has carried out various communication activities both to inform the OA community of its results as well as to advocate the service amongst researchers to enhance population efforts.

CA’s outreach to the OA community began with sharing its goals and ambitions with the OA community via a press release. This was distributed to the Dutch IR DARE network and other related projects and partners abroad.16 Later on, as part of DARC2 dissemination activities, it presented its harvesting tools to the Dutch DARE community at the DARE demo-fair in April 2006. In addition, DARE invited one of DARC’s enthusiastic researchers to share his experiences with the DARE repository-building audience, explaining how CA had supported him in his research and how CA might change the research process.

CA is a service for researchers, one that is nourished by them; a number of efforts were therefore made to involve and inform them. Researchers outside of the pilot were really targeted once the infrastructure and portal had been established. CA management feared losing its researchers were it to involve them prematurely without the necessary infrastructure and support in place. The decision to have a DARC roadshow promoting the deposit of material into IRs for DARC was therefore abandoned.

However, come DARC2, CA was ready to inform its international Africanist community of its service at venues where Africanists assembled, again inviting them to actively become involved in contributing to CA’s content. For example, at the Seminar for Nederlandse Vereniging voor Afrika Studies (NVAS), 26 Sept. 03, participants were invited to add themselves as experts to the site. DARC was shortly afterwards presented in front of a global audience at the digital libraries meeting of The African Studies Association, 46th Annual Meeting, in autumn 2003. Researchers of the global event also received a DARC press release. DARC2 developments and the preliminary portal were later presented at the Euforic Annual Meeting, 28 June 2006.17 CA was officially launched in September 2006, at its own event Bridging the North-South Divide in Scholarly Communication on Africa. Threats and Opportunities in the Digital Era Conference. This event is now planned to be one of a series in future. Sixty-five participants attended, 31% of which were from African countries. CODESRIA will as a result, set up an IR. The paper “Research unleashed”

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17 European Forum on International Co-operation (EUFORIC): http://www.euforic.org/
by M. Domingus gives an interesting insight into the potentials of providing and increasing access and impact to third-world research.\cite{18}

CA developed PR materials to further distribute information on the service to the research community producing a flier and a desk calendar for 2006 highlighting Africanist conferences based on content from its CA site’s calendar of events.

More recently, a Communication Plan has been developed and two articles have been submitted to both an Africanist journal and a library professional one. For the future, Oberst points out that although CA has already carried out a number of PR activities, it should probably do more to show the functionalities of the service developed to the end user. However, due to lack of funding at present this is on hold. Finally, van der Werf observes that it is an art to manage the researchers’ expectations. “Expectations need to grow at the same pace as the service.” Ambitious plans publicised to the researcher at the outset of developing the service need to be able to be honoured as far as possible. CA still faces the challenge to continue building on the ambitious service it hopes for - both on its functionality and content-stock. Researchers need to see their needs reflected in the development of the service, and CA needs to communicate this. By and large, CA has taken advocacy seriously in order to win over its content providers although it has more work to do to develop and publicise a service which researchers are not only willing to contribute their content to, but also to use in their research.

**Legal issues**

The Dutch pre-digitisation era policy which permitted the digitisation of pre 1998 journal articles, had a positive effect on the initial population of CA making more material available online. However, as far as current material is concerned, though it is electronically available, it is not always open access as part of CA as the self-archiving policies of Africanist publishers are either unknown or embargoes rest on the publications. Publisher embargoes have caused much material in partner IRs to be hidden. This is hampering the aims of the network and service.

Copyright concerns are still prevalent amongst researchers, and to ensure the deposit of current material, it is essential to be able to provide informative support here. In the first instance, CA responds to this by sending out emails to Africanist-relevant publishers not yet part of Sherpa/RoMEO with requests for information on publisher self-archiving policies; however, few publishers replied.\cite{19} The library also sent letters to selected publishers on behalf of some authors to make certain articles openly available resulting in a number of positive responses and thus more IR deposits. Otherwise, CA partners have educated researchers by providing workshops on copyright questions.

The local institutional policies will have an effect on CA deposit in the future. With the ASC’s new IR mandate policy in force since 2007, all ASC researchers will be requested to inform publishers that material be deposited in their IRs. This will potentially better guarantee the deposit of new material into the IR, and thus in CA.

\cite{19} Sherpa / RoMEO: [http://www.sherpa.ac.uk/romeo.php](http://www.sherpa.ac.uk/romeo.php)
Critical success factors for populating your repository-based service

The following CSFs have been identified by Connecting Africa for populating a repository-based service:

- An organisation with a key networking function in a specific subject community is in a sound position to lead a disciplinary portal service.
- Receive full backing from the most senior management of the institution leading the service for a) the initial idea, b) its development and c) its maintenance.
- Harvest IRs from the international community to aggregate more global content thereby attracting more interest from the research community and extending your network.
- Encourage contributors to establish a developed and simple workflow from research to publication to deposit material in a repository.
- A post-harvest analyser can serve to aggregate content more cost-effectively.
- Web services (based on SOAP) help bridge the gap between different information systems.

The learning curve

The following issues have been identified by Connecting Africa which can hamper the population of a repository-based service:

- Simple procedures for depositing material locally are not in place.
- Apathy by some researchers exist, i.e. paper hardliners do not contribute.
- Interoperability issues during the harvesting process can be time consuming.

Issues for possible further investigation

1) Is it preferable to have a recognised organisation with an information or networking function in a specific subject-community to run a disciplinary service, or are there other models which are just as effective?

2) Should there be more interaction with end users in the design of the service? What are the dangers of awakening expectations and not being able to fulfil them?

3) How does one motivate authors to both deposit and utilise newly developed services?

4) Should users of developed services and their depositors be utilised more in the advocacy process?

5) How can you use author-IDs developed for one service and deploy them for others in the future? Should author-ID systems be developed on a local level, subject-community one, national level, or international one, and what is the sustainability model?
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