Heritage Management and the World Wide Web: South African Challenges

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Abstract

This paper will discuss the systemic problems of heritage management in South Africa that have been highlighted by the fractured uptake of the South African Heritage Resources Information System (Sahris), and propose potential solutions to the challenges encountered since the promulgation of the National Heritage Resources Act 25 of 1999. Sahris has three primary functions encompassing, 1) a repository of national heritage sites, 2) a national collections management system, and 3) the integration of heritage management functions such as permit and development applications. This paper will focus predominantly on data and lessons learned from implementing Sahris as a tool for integrated heritage resource management. The first version of Sahris went live to the South African public in August 2012, allowing the South African Heritage Resources Agency (Sahra) to phase out paper-based and emailed submissions for applications in March 2013. Amafa/Heritage KwaZulu-Natal followed suit in April 2013. This has led to an improvement in the efficiency and responsiveness of these authorities and has provided a transparent mechanism for applicants and stakeholders to track heritage-related applications and official responses online. Despite the measurable gains made by Sahra and Amafa, the uptake of Sahris has been variable in other provinces in South Africa. The issues faced by each province will be summarised in this paper based on usage statistics generated on Sahris, interviews with key stakeholders, and experiences learned from rolling out the system nationwide over the last two years. A range of potential solutions to the current challenges will be proposed with the objective of steering and contributing towards better policy formulation and governance in this sphere over the next five years.

Résumé

Cet article traite des problèmes systémiques avec la gestion du patrimoine en Afrique du Sud qui ont été soulignés par l’assimilation fragmentée du système d’information des ressources patrimoniales d’Afrique du Sud (Sahris), et tente de proposer des solutions possibles aux défis rencontrés depuis la promulgation de la
Loi sur les ressources patrimoniales nationales (Loi n°25 de 1999) (NHRA). Sahris a trois fonctions principales englobant un dépôt des sites du patrimoine national, un système de gestion des collections nationales et l’intégration des fonctions de gestion du patrimoine telles que les demandes de permis et le développement. Cet article se concentrera principalement sur les données et les leçons tirées de la mise en œuvre du Sahris comme un outil pour la gestion intégrée des ressources patrimoniales. L’article traite des problèmes systémiques de la gestion du patrimoine en Afrique du Sud, problèmes accentués par le fait que le Système d’informations des ressources patrimoniales d’Afrique du Sud (Sahris) n’a pas suscité un intérêt unanime. Il propose des solutions potentielles aux défis rencontrés depuis la promulgation de la Loi sur les ressources patrimoniales nationales. Les trois rôles principaux du système sont de servir de dépôt d’archives patrimoniales nationales, de système de gestion des collections nationales et de système d’intégration pour les fonctions de gestion patrimoniale telles que les demandes de permis et les développements. L’article porte essentiellement sur des questions mises au jour par toute une série de caractéristiques liées à la gestion du patrimoine. La première version de Sahris a été lancée sur Internet et ouverte au public sud-africain en août 2012, permettant d’éliminer progressivement les demandes par écrit et par courriel en mars 2013. Amafa/Heritage KwaZulu-Natal a fait de même en avril 2013. Cette situation a permis d’améliorer l’efficacité et la capacité de réaction des autorités et a fourni un mécanisme transparent permettant aux demandeurs et aux parties prenantes de traquer les demandes relatives au patrimoine, ainsi que les réponses officielles en ligne. Malgré les gains mesurables fait par Sahra et Amafa, l’intérêt suscité par Sahris varie d’une province à une autre. Les problèmes rencontrés par chaque province seront résumés dans l’article et se baseront sur des statistiques d’utilisation générées par Sahris, sur des entretiens avec des parties prenantes clés et sur les expériences acquises lorsque le système a été introduit à l’échelle nationale ces deux dernières années. La situation en Afrique du Sud sera également contextualisée avec pour toile de fond la gestion du patrimoine sur le plan international et tentera d’expliquer l’inactivité autour du forum public. L’article proposera une gamme de solutions potentielles aux défis actuels, avec pour objectif le pilotage et la contribution à la formulation et à la gouvernance de meilleures politiques dans ce domaine durant les cinq prochaines années.

Legislation:

Section 33 of the KwaZulu-Natal Heritage Act (KZNHA) providing general protection to structures older than 60 years;
Section 8 of the National Heritage Resources Act (NHRA) defining the responsibilities and competence of heritage resources authorities and local authorities for the identification and management of heritage resources;
Section 14 of the NHRA providing for the establishment and constitution of the Sahra Council;
Section 34 of the NHRA providing general protection to structures older than 60 years;
Section 38 of the NHRA legislating management of heritage resources at possible risk from development.
Introduction

About Sahris

The South African Heritage Resources Information System (Sahris) is a free open source web-based heritage management system built on the Drupal Content Management System and Geoserver (Wiltshire 2013). It was developed by the South African Heritage Resources Agency (Sahra) in the first half of 2012 to provide case management (permitting, impact assessments, surveys, gradings and declarations) and to serve as the national heritage register/inventory of all heritage sites such as cultural landscapes, buildings, archaeological and palaeontological sites and graves, among others. Sahris was further developed in the latter half of 2012 to provide a collections management suite for handling objects in museums.

By July 2014, 11 177 volumes of archival records in Sahra’s registry had been scanned and uploaded to Sahris. A total of 25 192 sites and 14 453 objects had been migrated into the system (sahra.org.za 2014). More than 2 600 users have registered accounts on Sahris, and more than 137 000 records have been published. Sahra has run 49 Sahris workshops and trained more than 1 000 people to use the system. In less than two years, the introduction of Sahris has pushed the worldwide ranking of the Sahra website from 3.5 millionth to 750 000th in the world (alexa.com 2014). In October 2013, the world’s first palaeo-sensitivity map was released on Sahris in collaboration with the Council for Geoscience (Lavin & Wiltshire 2013).

Despite these measurable gains, acceptance of the system by provincial heritage resources authorities (PHRAs) has been patchy and a number of issues have surfaced which must be overcome in order to fully utilise the advantages offered by Sahris.

Current state of the implementation of Sahris at provincial level

After introducing Sahris internally to the staff of Sahra in Cape Town and Pretoria between May and July 2012, the system was opened to members of the public and the PHRAs in August 2012. The first of several workshops across the country was run in Bloemfontein in October 2012, and by the end of January 2013 all nine provinces had been provided with on-site training and presentations on the system.

In April 2013, the KwaZulu-Natal provincial heritage authority, Amafa, formally adopted Sahris for their permit applications and heritage management functions (Amafa 2013). In April 2014, Amafa’s built environment unit reverted back to processing applications manually on paper and via email (Amafa 2014). In seven of the remaining eight provinces, the uptake of the system was hindered by various factors that we will go into in more detail in this paper. In one province, the Western Cape, the PHRA, Heritage Western Cape (HWC), has not agreed to use Sahris and is developing its own system instead (Heritage Western Cape 2014).
The challenges

Identifying the main factors affecting the implementation

Despite being used extensively by Sahra and Amafa in KwaZulu-Natal, Sahris has failed to gain much traction in the other provinces in the two years since the system was rolled out nationally. We have therefore attempted to identify the key factors affecting the provinces (in no particular order):

- Staff
- Skills
- IT infrastructure and other communication facilities
- Governance
- Funding.

In addition to the factors affecting the provinces, three additional issues have been identified that are within the ambit of the national heritage authority, Sahra:

- Training and resources provided by Sahra
- Devolution
- Sahra’s relationship with the Department of Arts and Culture (DAC) with respect to the provinces.

Table 9.1 presents these barriers as relative scores between the provinces. The weightings given are broad and the breakdown is not a complete reflection of the enormous challenges which must be overcome to run a successful heritage authority in South Africa, nor does it reflect on or criticise the individual abilities of the staff employed at the PHRAs (Ndlovu 2011). Table 9.1 does not define the number of staff required to run a PHRA and it does not claim that the budgets allocated to HWC or Amafa are adequate. Instead, we are trying to emphasise the clear patterns revealed in this table with constructive solutions in mind.

Challenges posed by the devolution process

Before we delve into a review of the devolution process required by the National Heritage Resources Act (NHRA) over the past 14 years, we would first like to state that we avidly support devolution to provincial and local level for all forms of heritage management. The former National Monuments Council (NMC), while successful at declaring thousands of sites, centralised decision making. It is a decidedly ineffective model for South African heritage management as the sheer bulk and complexity of applications has exploded since 1989 after the promulgation of the Environment Conservation Act (No. 73).

In 1999, the NHRA introduced a three-tiered system for heritage management in South Africa in line with ‘new public management’ policies adopted by other countries that had been consulted for best practice in writing up the NHRA (Dunleavy et al. 2006). The NMC, a single national authority with provincial offices, had been
replaced by Sahra and this new entity was given a mandate to facilitate the devolution process to the remaining eight PHRAs (Amafa was established in 1997 before the promulgation of the NHRA). Each of these PHRAs in turn was to be responsible for devolving powers for managing local heritage sites to the municipalities (Ndlovu 2011). A well-managed heritage register or inventory system was a crucial requirement before this process could be concluded, as the various incumbent heritage authorities across the three tiers would be incapable of exercising jurisdiction over their sites unless they were officially identified and graded.

This principle of localising decision-making power is central to the NHRA, with the aim of integrating heritage management within the overall land-use and planning process. This concentrates the bulk of power and authority at the local level and provides tangible mechanisms for public participation in affairs that directly affect citizens across the country. However, many heritage managers are still drawn to the ideology of monumentalisation, specifically the declaration of sites that have a strong political agenda, rather than the progressive, systematic, ongoing management and conservation of heritage resources in the broadest sense.

In 2003, PHRAs were set up in the various provinces with agreements to fund and staff them through the provincial departments of Arts, Culture, Science and Technology. Prior to this, Sahra had devised a fairly elementary minimum set of requirements for the establishment of the PHRAs (DACST 2000). At the time, the requirements were based on the level of resources allocated to the provincial offices

Table 9.1 Barriers as relative scores between the provinces. Source: K. Smuts & N. Wiltshire

<table>
<thead>
<tr>
<th>PHRA</th>
<th>Staff</th>
<th>Skills</th>
<th>IT Infrastructure</th>
<th>Governance</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Cape</td>
<td>10–20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>20–30</td>
<td>Admin, Archaeology, Palaeontology, Built Environment, GIS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gauteng</td>
<td>5–10</td>
<td>Admin, Built Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Cape</td>
<td>2</td>
<td>Admin, Built Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>3–5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limpopo</td>
<td>3–5</td>
<td>Admin, Built Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>2</td>
<td>Admin, Built Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North West</td>
<td>3–5</td>
<td>Admin, Built Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free State</td>
<td>0 (1*)</td>
<td>Admin</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Heritage Free State’s only staff member is an administrative assistant, not a heritage officer.

Colour ranges from 0 (worst) to 3 (best). ■ Red = 0; ■ Orange = 1; ■ Yellow = 2; ■ Green = 3
of the NMC with no projections for growth in capacity required when these PHRAs would devolve powers further to local authorities. Sahra’s capacity at its level of the devolution process has been unsatisfactory and the problems this has caused have been passed on to provincial level.

Sahris provides the tools for monitoring the processes, efficiency and compliance levels of all users. This is a vital function if devolution is to succeed, as prior to Sahris, delegating authorities had little or no information at hand to assess what level of accountability could be expected from the tier below them after devolution was complete. Even more concerning is the complete omission of devolution to the local municipality from recently drafted heritage bills in the Northern Cape and Gauteng (DSAC 2013; DSACR 2013).

While HWC and the City of Cape Town Metropolitan Municipality should be applauded for initiating the devolution of powers to local level (Heritage Western Cape 2014), the process has thus far taken more than seven years and is plagued with ambiguity as the grading of identified heritage resources in the area is not yet complete. In so-called ‘heritage overlay zones’ largely based on previously delineated ‘conservation areas’, the City of Cape Town has full decision-making powers for applications that do not affect a national or provincial heritage site. This currently limits the heritage authority of the local municipality to well-defined areas and leaves a grey area in managing the grading of local heritage sites identified during Section 38 applications. The example established by these two authorities for the remaining 225 local municipalities across South Africa will be a difficult one to replicate.

To date, Sahra has failed to revise its minimum requirements for PHRAs and although it is supposed to reassess the competence of the PHRAs at least every two years according to Section 8(6)(d) of the NHRA, this has not been done consistently. The inadequacies of the assessment process are highlighted in the case of the PHRA in the Free State, which does not employ any permanent staff or fulfil the basic requirements set out by Sahra for the establishment of a PHRA, but continues to be assessed as ‘competent’. No criteria exist between Sahra and the PHRAs for reporting on the annual number of applications processed, the number of sites identified and graded, or for proposed legislative amendments. Furthermore, the composition of Sahra’s Council has regularly failed to comply with Section 14(1)(a) of the NHRA, which stipulates that at least one representative of each province occupies a position. Sahra is constitutionally bound to take the interests of the provinces into account, but instead finds itself alienated and unable to effectively monitor and evaluate the provinces.

While these problems are serious, they are not insurmountable. The introduction of Sahris provides an instant monitoring and evaluation tool throughout the three tiers of heritage management in the country, and provides a cost-effective means of solving the technical and administrative challenges hampering service delivery and
accountability. For the system to be effectively implemented as a tool to assist in the process of devolution, a proper endorsement and commitment to Sahris by DAC at national and provincial level is needed. Furthermore, effective decision making is required from Sahra’s executive management team in order to address the gaps in their guidelines, policies and regulations related to the devolution process. This will go a long way towards strengthening their role as a guiding institution for heritage management in South Africa.

Unpacking the issues in each province

In theory, the number of staff required to execute certain functions should be directly proportional to the amount of work expected to be completed by them. For instance, at HWC, at the time of writing there were five heritage officers and an assistant director assigned to the processing of built environment applications. During the 2012/2013 financial year, 1 206 applications (averaging 100 per month) were processed in terms of Section 34 of the NHRA; this section relates to the protection of buildings older than 60 years. At Amafa, 520 applications (averaging 43 per month) were processed in terms of the corresponding section under its Act, Section 33 of the KwaZulu-Natal Heritage Act 4 of 2008, by a team of three heritage officers. The average number of applications processed per heritage officer per month is comparable at both these PHRAs, with HWC at 16.7 and Amafa at 14.3.

In the rest of the country, the number of permits or approvals issued per case officer drops off dramatically. In Gauteng, 138 applications were processed during the 2008/2009 financial year by a team of three heritage officers. Their monthly average was 12 cases and 3.8 per case officer. In other provinces the statistics are rarely even published in their annual reports. During the roll-out and training of Sahris in the Northern Cape, we discovered that only four Section 34 applications were dealt with between July and October 2013, an average of one per month between two heritage officers.

Alarming as this may seem, the number of applications submitted to the PHRAs is not substantially more than the number actually processed. This is due to the fact that in Cape Town, Pietermaritzburg and Durban, municipal compliance with the NHRA/KZNHA has been entrenched for a much longer time and there are close relationships between the PHRAs and local municipalities in those areas. It is a more daunting task to achieve levels of compliance anywhere near to those in Cape Town or Durban in outlying areas for even the best-performing provinces (see figure 9.1).

Another large source of applications relates to Section 38 of the NHRA, which legislates heritage resource management and development applications. HWC, Amafa and the Eastern Cape PHRA (ECPHRA) are currently dealing with Section 38 applications in their provinces. As no archaeologists are employed by the PHRAs in the Northern Cape, Free State, Gauteng, North West, Mpumalanga and Limpopo, Sahra’s
Archaeology, Paleontology and Meteorites (APM) unit continues to process the majority of development applications triggering Section 38 of the NHRA.

This arrangement persists 10 years after the creation of most of the PHRAs, and is problematic on both administrative and philosophical grounds. For one, we have found that heritage officers at provincial level seldom, if ever, comment on or participate in co-assessing the built environment, visual and other components of Section 38 developments submitted to Sahra’s APM unit. Even the introduction of Sahris two years ago has done little to improve the level of interaction between the underperforming PHRAs and Sahra.

This is unlikely to change until the PHRAs appoint appropriate specialist staff and Sahra completes the full handover of all provincial and local duties to the rest of the provinces. Currently, applicants are able to obtain approval for their developments as long as they receive an official comment from at least one of the two parties. Secondly, a heritage impact assessment has become equivalent to an ‘archaeological’ and/or ‘palaeontological’ impact assessment as the assessing authority (Sahra’s APM unit) primarily deals with these two aspects. Splitting the assessment of Section 38 applications into different sub-disciplines of heritage was not the intention of the NHRA and only HWC has meaningfully attempted to resolve this by combining disciplines in the form of committees at both staff and council levels.

After Sahris was implemented we were able to quantify the percentage of Section 38 applications receiving heritage input. In Mpumalanga, fewer than 30 % of applications approved by the departments of Mining or Environmental Affairs received any heritage consideration by Sahra or the Mpumalanga Provincial Heritage Resources Authority (MPHRA). Again, this contrasts starkly with HWC or Amafa, who manage

![Figure 9.1 Map of permit applications (mainly for building alterations) in KwaZulu-Natal. Source: Google Maps (2014) & Sahris (2014)](image)
to consider nearly every Section 38 application received in their provinces. The Eastern Cape is currently the only other province employing a full-time archaeologist but the roll-out of full devolution since 2012 has been beset with governance issues between the ECPHRA and their provincial DAC.

In 2013, the ECPHRA had to shut down its offices in King William’s Town and relocate to makeshift offices outside the Department of Public Works in East London (Heritage Portal 2013). The ECPHRA is also the only PHRA that has attempted to take on the full ambit of duties with a small staff contingent. The ECPHRA has struggled to access shared resources that would ordinarily be available, such as finance, human resources, security, monitoring and evaluation, IT, vehicles and property management. The ECPHRA is therefore at risk of becoming another failed heritage authority as the working conditions offered are not conducive to retaining the skills that have been acquired.

In the Northern Cape and Gauteng, both provinces recently embarked on the expensive exercise of writing their own legislation. What is clear from both pieces of legislation is that the current funding allocated by the DAC is inadequate. Both provinces have attempted to resolve this by pushing for increased independence from their provincial DAC, but the cost of duplicating the overheads of human resources, auditing, finance and so forth have not been properly considered.

The current sharing arrangement of staff and facilities for the PHRAs by the provincial DACs in the Western Cape, Free State, North West, Mpumalanga, Limpopo and Gauteng has had its drawbacks. In provinces with effective management this arrangement is succeeding in part (Western Cape), but in others it clearly is not. During the training and roll-out of Sahris we found that the availability and speed of the internet was either sporadic (Limpopo) or throttled to less than 10 kbs per second (North West, Gauteng). Mpumalanga had a slow and barely useable internet connection. In each of these provinces our attempts to improve the speeds on behalf of the PHRAs led us to failed dealings with IT departments under the auspices of the State Information Technology Agency. Given that Sahris requires a reasonable ADSL connection to the internet for up to three to five users sharing an office, it has been an extremely frustrating experience implementing a web-based system in offices where internet access is treated as a non-essential service.

**Monitoring and evaluation potential**

Now that some of the challenges have been identified and described, we would like to draw on various data extracted from Sahris that aptly demonstrate the way the system automates the monitoring and evaluation process. Many of the useable statistics were generated from the applications considered by Amafa, the only PHRA thus far to have
implemented meaningful adoption of Sahris adequately at provincial level, and from Sahra nationally.

The spatial queries available in Sahris are demonstrated in figures 9.1 and 9.2. Figure 9.1 clearly shows how few applications are being submitted outside of Durban, the main city in KwaZulu-Natal. Furthermore, it maps out the lack of compliance with the KZNHA and the NHRA within the boundaries of Durban itself. These maps assist heritage authorities in pinpointing which local authorities require more attention and training and can be drawn up for authorities at lower tiers that are accountable to the authority above them (as in the City of Cape Town Metropolitan Municipality to HWC).

In figure 9.2, the map of developments occurring in KwaZulu-Natal is shown. These maps can be used by planners projecting the impacts of long-term projects over the next 5 to 20 years or by current applicants seeking guidance on the nature and scale of mitigation required to see through their developments.

Importantly, all of this information is in the public domain as soon as the application is submitted to ensure transparency throughout the application process. Figure 9.3 illustrates the number of records created by officials within the various heritage authorities. This information can be dynamically updated on the system at any point and calculated for any date range where historical data exist. This graph shows all records, regardless of type (sites, cases, permits). Over time one would expect the ratio of content authored by the PHRAs to grow, eventually eclipsing that by Sahra officials.

The map in figure 9.4 tracks the number of community or public user visits to Sahris by city. This information can be used by heritage authorities to establish the degree of success or impact of educational campaigns targeting awareness of heritage conservation. It also shows the relative interest in heritage matters in various cities,
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such as in Johannesburg, even where the data set of applications (figure 9.1) is negligible for PHRAs not fully utilising Sahris.

Figure 9.5 is a cumulative map showing the locations of all sites captured on Sahris. This map can be displayed per province, per municipality, by grading category or even by recording group. The large amount of data migrated from repositories in the Western Cape and KwaZulu-Natal distort the overall distribution of sites around the country.

The five illustrations included in this paper are just a small selection of a much wider range of automated views of the data available in Sahris. They demonstrate the flexibility of the system, the graphical display of spatial and statistical information, the
ability to filter data by any date range or content type, and the interrogation of audit trails per officer, department or heritage authority.

We argue that devolution is extremely challenging to execute meaningfully unless these kinds of interfaces are available to the receiving authorities taking on powers in terms of the NHRA, and to those authorities that have undertaken the monitoring and evaluation roles at higher levels.

Devolution, which can take many years to accomplish, will need careful monitoring to ensure that the process is being implemented effectively and that expectations of transparency and service delivery are met. Sahris allows anybody to query the efficiency of the devolution process prior to, during and after devolution. As Sahris is provided free of charge to all three tiers of government, it can facilitate these monitoring protocols through its integrated architecture.

Sahris leaves the decision-making power in the hands of the relevant authority at local, provincial or national level while supporting data – both heritage and performance related – on a centralised platform. The reporting function can subsequently be used to rectify the misallocation of funds between the various heritage authorities based on scale, resources and demand logged on Sahris.

**Conclusion**

In conclusion, we have presented some of the issues faced by PHRAs around the country and how these factors prevent them from operating efficiently. We have further highlighted the challenges of the devolution process and how this affects the proper management of heritage resources as envisaged in the NHRA.
While Sahra has played a role in the shortcomings of the devolution process, through Sahris it has also devised a system that, if utilised to its full potential, can assist significantly and constructively with this process going forward.

Despite the benefits offered by the system, however, take up has been patchy across the provinces, with many of the issues that plague the PHRAs operationally serving to inhibit their adoption of Sahris as well.

Sahra must continue to foster the ongoing development, support and maintenance of Sahris to keep abreast of technological improvements and the requirements of their users. Simultaneously, the organisation urgently needs to work with the PHRAs to improve the IT governance structures at national and provincial level.

References