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INTRODUCTION

The ICOM CC Working Group for Education & Training has been conscious that some regions of the world are underrepresented within ICOM CC and that much working group activity is based in Europe or the North Americas. Out of a total membership of 2,240 only 1.3% are from Africa, 2.3% from Asia and 5% from Latin America (the majority from Brazil). We decided to publish a special e-journal in advance of the Triennial Conference in Melbourne in order to reflect current issues and ideas about conservation education and training worldwide in a more representative way. Experiences from Africa, Asia and South America, as well as other parts of the world less represented in ICOM-CC were to be the focus of the journal.

The response from colleagues working in these regions has been exceptional and it has been a joyous and inspirational experience to read of all the events, activities and developments that they have been engaged in. The journal will undoubtedly strengthen the network of conservators around the world who are involved in education and training and open the way for exchanges and collaborative projects.

Best wishes

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ARGENTINA

TEACHING PHOTOGRAPHIC CONSERVATION IN BUENOS AIRES, ARGENTINA

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My name is Mauro Mazzini and I am a photographic conservator. I was born in Argentina but have worked abroad, leaving Argentina when I was twenty but returning in 2011 for a period of three years when I was thirty one.

Conservation activity in Argentina has been poor for some time. This is partly due to a lack of knowledge and material resources but also to the resistance of many institutions to acknowledge and accept that many archivists and librarians now have college diplomas and that their knowledge and understanding enable them to undertake high levels of responsibility for the care and conservation of their collections. In particular there seems little interest in photographic conservation in many institutions. Individual conservators are interested in learning and sharing but often feel very isolated in their work.

The first course that I delivered took place on 16th and 17th December 2011 at the Museum in Buenos Aires. It took a total of 16 hours and focused mainly on theory with some visual identification and handling exercises and discussions around some practical case studies. With hindsight it was clear that the 09.00 – 18.00 duration of each day was too long for many of the delegates.

The second course took place in February 2012 and included sessions on six consecutive Saturdays covering a total of twenty four hours. These sessions allowed us to provide more time for practical work, which helped embed the theory. The sessions were repeated five months later in the same year in June.

The December 2011 course included nineteen assistants from two archives, a museum and the students from the conservation-restoration of cultural heritage programme that does not include photographic materials in their program.

The courses in February and June 2012 both included twelve participants. Approximately 60% were of middle age and already working with photographic collections and the remainder were students in their early 20s.

At the end of 2011 I tried to co-ordinate a course in photography for conservators but despite a high level of interest the time available ran out.

In March 2013 I started working with the Argentinian Photojournalist Association (ARGRA), who had rescued an entire photo archive from a magazine covering the period 1998-2006. I organized the subsequent courses at their institution. I worked with two colleagues, who had assisted me with previous work experiences. We provided two days of practical work over a forty hour period. At the same time I also organised a slightly shorter course aimed at helping photographers care for their own materials, which lasted 30 hours. Both courses ended in August 2013 and had a total of seventeen students.

I left Argentina in mid September after participating in a seminar on photographic conservation.
aimed at school teachers who are responsible for photographic collections in their local libraries. My presentation focused on the image permanence of colour analogic photographs.

Since my departure the colleagues who assisted in co-ordinating the courses at ARGRA have continued to repeat the courses at the ARGRA headquarters.

(photos by Natalia Ibarra)

Fig 1 Examples of degraded cellulose based photographs

Fig 2 Cleaning Practice
Fig 3 A discussion about fungal problems relating to tri-acetate gelatine films

Fig 4 Practice with damaged material
The conservation course at the University of Canberra has recently been redesigned to provide students at undergraduate level with a broad heritage and materials conservation education. The conservation course has become part of the new Bachelor of Heritage, Museums and Conservation, which offers students majors in Conservation, Museums and Cultural Heritage, and brings teachers and students of heritage together in a shared community of practice and professionalism.

The conservation units in this degree do not stream students into the traditional object specialisations of paintings, paper, textiles and objects. Instead students study six units that each address a core aspect of materials and their behaviour, regardless of what object type they are found in. These units are: Cultural Heritage Field School, Materials in Heritage Conservation; Preventive Conservation; Dirt and Cleaning - Philosophy and Techniques; Surface Colour and Completeness; and Sustainable Repair and Restoration. Conservation students also undertake two chemistry units and two forensic science units, the latter being used to familiarise them with analytical techniques and the use of evidence to understand cause and effect. An optional internship or research project provides further practical experience in heritage.

Fig 1 Students of the UC course transporting a large bellows from the Ginninderra Blacksmith’s Shop to the conservation laboratory for treatment. Image: Tracy Ireland 2012
Alongside these subjects, the students study the ideas that define our understanding and inform our practice of heritage. Units such as People Place and the Past, Global Perspective on Heritage Management and Heritage Philosophy and Ethics provide conservation students with the language and confidence to participate in wider heritage debates, and to be aware of the cultural and ethical assumptions that underpin their own conservation practice.

The units in the conservation major do not have pre-requisites. This means that students studying other aspects of heritage, and indeed other degrees, can take them as electives. This has the triple benefit of raising awareness of conservation approaches among other professionals, bringing a diversity of approaches to class discussion, and making the units more economically viable. This also means that every unit begins with a recap on basic conservation and laboratory techniques, which reinforces core learnings for all students. From 2015, for students that cannot relocate to Canberra for the full three year degree, there will also be the option of undertaking the first year of the course in a blended model of online lectures and practical intensives.

The aim of the new course structure is to produce capable and flexible graduates who are primed to think collaboratively and to draw inspiration and ideas from all walks of heritage life. They will know how to work safely in a laboratory or on-site, how to observe and document what they see, and how to handle and move objects safely. They will understand the basic formation, structure and mechanisms of deterioration of a broad range of materials, and have a good working knowledge of how different materials respond to different interventions. They will be familiar with the principles of scientific reasoning and analysis, and understand the fundamentals of preventive conservation and risk management. They will understand the importance of values and significance in determining an appropriate treatment for an object. They will be graduates that are ready to step
into a team, fully equipped with a general skill set, self-pacing, and ready to absorb specialist knowledge as required.

We would love to network with other people offering training in conservation. If you would like further information about the Bachelor of Heritage, Museums and Conservation at the University of Canberra, please contact:
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Head of Discipline of Humanities Tracy Ireland on tracy.ireland@canberra.edu.au
Or see the course website at
Historically significant African photographic collections face serious environmental and economic risks. The absence of formally trained photograph conservators in this region makes the need for informed preservation professionals essential to care for the wealth of photographic heritage dating from the early nineteenth century to the present.

In response to these challenges, the École du Patrimoine Africain (EPA) partnered with the Department of Art Conservation at the University of Delaware, the Centre de Recherche sur la Conservation des Collections in Paris, Photograph Conservation at The Metropolitan Museum of Art, and Resolution Photo to identify important photographic repositories at risk, and to develop, organize, and administer a four-day Photograph Preservation Workshop held April 22-25, 2014.

Our four-day workshop included 24 established curators, photographers, collection care professionals, and directors of contemporary art centers, museums and regional archives deeply committed to the preservation of African heritage in Africa. Well over 50% of the participants were talented artists/photographers who care for influential archives, including those representing the collections of Roger DaSilva of Senegal, Paul Kodjo of Côte d’Ivoire, Bâ and Bamba of Mali, and J.D.’Okhai Ojeikere of Nigeria, all photographers of historic and cultural significance.

In Africa, important photograph collections have been discovered in flea markets, sold to western collectors at low prices and in some cases even taken from the families under false presences. They are held privately or housed in regional museums and libraries where controlled environments are
rare, electricity never guaranteed, and damage caused by flash floods, silverfish, termites, and mold extensive. The threat to these collections is substantial and almost completely unacknowledged outside of the continent.

Core lectures and hands-on demonstrations were taught by Bertrand Lavédrine (Centre de Recherche sur la Conservation des Collections, France), Debra Hess Norris (University of Delaware Department of Art Conservation), and Nora Kennedy (Photograph Conservation at The Metropolitan Museum of Art). Touching on everything from identification of negative and print processes and creative storage solutions, to advocacy and grant-writing, the workshop sparked probing questions and compelling contributions from all quarters. Our teaching was hands–on where possible and translated simultaneously to ease communication.

Additional discussions were led by Fatima Fall (director of the Centre de recherche et documentation du Sénégal museum, library, and photo archive in Saint-Louis, Senegal); Henrike Grohs (director of the Goethe-Institut in Abidjan, Côte d’Ivoire), Franck Ogou (curator, cultural producer, and cultural heritage manager at the École du Patrimoine Africain in Porto-Novo, Benin); and Erin Haney and Jennifer Bajorek (co-directors of Resolution Photo and organizing partners). These speakers addressed diverse issues related to public programming, community outreach, advocacy, intellectual property, and digitization. Participants also took the floor for a formal, 10-minute presentation of their collections and/or institutions. Some of the most exciting brainstorming sessions focused on the use of traditional clay and earthen architecture to provide passive cooling and ventilation.

Our African colleagues spoke eloquently and with passion about the preservation of these rich photographic resources. While great strides have been made in the preservation of photography in Africa, the broadening of networks and further dissemination of information as a result of this workshop is a further step in connecting and empowering talented African archivists, artists, collection care professionals, directors and educators capable of advancing preservation practice, public programming, and advocacy. We aim to ensure this work continues through additional programming, online mentoring, and an investment of new preservation funding for collections at-risk.

We are grateful to our many funders for their generous including: L’École du Patrimoine Africain (The School of African Heritage), the University of Delaware Department of Art Conservation and Institute for Global Studies, Tru Vue Inc., The Metropolitan Museum of Art, the Centre de Recherche sur la Conservation des Collections, the Goethe-Institut Abidjan, the Center for Research and Restoration of the Museums of France, University Products, the Getty Conservation Institute, the American Institute for Conservation Photographic Materials Group, The Better Image, and our many generous individual donors.
Fig 1 Examination

Fig 2 Risk Assessment
Fig 3 Discussion Group

Fig 4 The Delegates
A CRITICAL AUTO-ETHNOGRAPHIC STUDY OF SOCIO-CULTURAL INFLUENCES ON CULTURAL-HERITAGE PRESERVATION EDUCATION OF WORLD HERITAGE SITES IN THE CONTEXT OF NORTH-EASTERN BRAZIL

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Architect, Urban Planner and Cultural Manager. Lecturer at the Centre for Advanced Studies in Integrated Conservation (Brazil) and PhD researcher at Curtin University (Australia). Postgraduate in Cultural heritage integrated to urban planning; in Management of conservation works and cultural heritage restoration; and Project management. Master in Cultural Heritage studies. Heritage practitioner for 17 years, leading, coordinating, supervising and managing cultural and heritage departments, also responsible for planning and implementing the preservation public policies in Sao Luis (Brazil). My work is focused on developing strategic plans and initiatives to promote inclusive economic and social development and carrying out preservation policies of World Heritage sites.

Summary of the project
This critical autoethnography, developed under a critical-constructivist paradigm, investigates preservation education systems at world heritage sites located in North-Eastern Brazil, the country’s poorest region. The study considers issues framing the preservation education system such as courses performance, training quality, preservation issues and also context-related factors impacting on conservation training, such as ingrained standards from colonialism, social inequality, political problems and lack of empowerment. It aims to:

1. Identify historical and political factors, practices, and values influencing the preservation training system in Brazil
2. Investigate the effects of socio-economic issues within cultural heritage education programs on social justice, empowerment, cultural inclusion and social equity
3. Identify quality indicators for the monitoring, evaluation and improvement of the programs considering local context and resources
4. Suggest guidelines for reconceptualising existing training programs in light of cultural- and social sensitivity for reaching sustainable standards

The case studies that the research focuses on include the three World Heritage historic centres located in North-Eastern Brazil - São Luís, Olinda and Salvador - investigating in depth São Luís, the poorest and largest center. Qualitative ethnographic research methods were applied such as semi-structured interviews, direct and participative observation, fieldwork notes, plus archival research.

Findings from the first phase of this study indicated issues not only regarding preservation but the whole educational system. The Brazilian education system has its root on colonialism. It was set up as mirror image of those in the motherland with curricula designed to civilize natives, Indians who through a 300-years process of miscegenation with Africans and Europeans are the anthropological roots of the current Brazilian society. In this process of ‘education’, based on the assimilation of the
dominant cultural beliefs, values, practices and languages of the colonizers, local knowledge and language systems were suppressed and the cultural integrity, identities and livelihoods were severely undermined. Nowadays, this population has little right to participate in decision-making processes, suffer from a poor standard of living and are kept powerless and marginalised and under disguised political control. This hash context has a direct impact on how preservation education training has been developed in Brazil.

The study provides a thorough critical analysis of this context. It will be helpful for understanding the complexities of the social systems involved in urban development that affect training programs in developing countries. This investigation is the first critical qualitative evaluative study of cultural-heritage education in North-Eastern Brazil, useful for practitioners, researchers, lecturers and managers to understand the impacts of the socio-cultural context on training-centre performance. Furthermore, the study will contribute to the body of knowledge on education effectiveness, pertinence, resource feasibility and capacity building of the preservation education training programs. Also, it may support preservation education projects and conservation efforts throughout and potentially beyond Brazil, including Portuguese- and Spanish-speaking countries in Latin America, Africa and Asia, with similar contexts to the North-Eastern region of Brazil.
DEVELOPING A CONSERVATION PACKING COURSE IN RIO DE JANEIRO

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With the experience gained during 20 years of work in the Museology Department of the Museum of Modern Art of Rio de Janeiro (MAM-RJ), we (Veronica Cavalcante and Claudia Calaça) decided in 2009 to offer a short undergraduate level course aimed at Museology students.

The syllabus of the course deals with the handling and packing of works of art for transport and is structured to provide a brief theoretical introduction to preventive conservation, the importance of care in the handling, the risks associated with handling and transportation, the characteristics of packing materials available in the Brazilian market and recommendations for their use with each kind of object and situation. As a complement to the theory students are shown examples of packing solutions that demonstrate the distinct options available: simple or double walled crate, crate with drawers, soft packing, and slat crates, among others. They are also shown the equipment associated with packing and handling including the different kinds of gloves that are available and their recommended use, the equipment used to move items of the collection inside the institution. There is an exercise at the end of the course in which the students have to develop appropriate packing strategies for an artifact. The exercise is conducted in small groups and afterwards there is an opportunity to discuss the solutions provided. The emphasis of the course is on the daily practical needs of a professional working in the area.

When the course was first offered in 2009 the majority of students were undergraduate students. However in subsequent years it has attracted more professionals that work in museums, art galleries, and related areas. The number of participants in the course has grown through the years, as has the length of the course.

The course was created to fill a gap since there is little focus on the area in university courses, and there are few references available in Portuguese on the subject. The classes are kept small, so that attention can be given to each student and assistance provided during the practical session. The small group also ensures that there is the opportunity for each student to participate and present their opinions and concerns. The course has run five times since 2009 with a total of ninety participants. According to an evaluation performed at the end of the course, the participants had their expectations fulfilled and were satisfied. The course is offered annually in Rio de Janeiro, Brazil.
Fig 1 The students in a practical exercise

Fig 2 An example of packing a work of art in a double crate
On May 2012, the first meeting on the preservation of paper and cultural objects using ionizing radiation was held in São Paulo – Brazil. The conference was organized by the Nuclear and Energy Research Institute – IPEN, the Institute of Brazilian Studies and the São Paulo University Contemporary Art Museum and sponsored by the International Atomic Energy Agency and the Sterilization Brazilian Company. This meeting aimed to promote the use of ionizing radiation processing as an alternative to disinfestation and disinfection of paper documents, books, paintings, sculptures and various cultural objects additionally topics related to technology principles, healthcare of archivist’s professionals were deliberated. The more relevant cases applying radiation processing to preservation of cultural heritage experienced for 10 years by the Multipurpose Gamma Irradiation Facility at the Nuclear and Energy Research Institute – IPEN were presented by Brazilian restorers and conservators. The worldwide state of art and cases studies of this technology were shown by specialist of the ARC-NucléArt/CEA-France and the Netherlands Organization for Applied Scientific Research – TNO in special lectures including the Ramses II and baby mammoth irradiations. Several workshops to discuss the advantages, disadvantages and restriction of this technology were also performed. More than 1300 conference participants including restorers, conservators, museologists, librarians, curators, etc. attended the meeting. After the conference on paper conservation, the activities related to disinfestation and disinfections increased between 200%-300% specially books. Institutions working with conservation of cultural artifacts, addressed users to IPEN when traditionally methods fail. It’s necessary to Increase the frequency of workshops and meetings on radiation processing in cooperation with other institutions acting within conservation field to target conservators and related specialists. Our experience has shown this kind of meeting is extremely important to fortifying the relationships between researchers/radiation technicians and the conservators.
Fig 1 Meeting on preservation of paper and cultural objects using radiation processing at Nuclear and Energy Research Institute – IPEN /CNEN – Brazil.

Fig 2 Multipurpose Gamma Irradiation Facility at Nuclear and Energy Research Institute – IPEN /CNEN – Brazil.
**Fig 3** Cobalt-60 radioactive sources used in the Multipurpose Gamma Irradiation Facility at Nuclear and Energy Research Institute – IPEN / CNEN – Brazil.

**Fig 4** Documents processed by radiation to eliminate fungi.
Fig 5 Wood objects disinfested in the Multipurpose Gamma Irradiation Facility at Nuclear and Energy Research Institute – IPEN /CNEN – Brazil.

Fig 6 Disinfection of books in the Multipurpose Gamma Irradiation Facility at Nuclear and Energy Research Institute – IPEN /CNEN – Brazil.

Fig 7 Disinfection of a painting from the 17th century contaminated with fungi radiated using gamma rays by the Multipurpose Gamma Irradiation Facility at Nuclear and Energy Research Institute – IPEN /CNEN – Brazil.
CAMBODIA

A POST-GRADUATE PROGRAM FOR TRAINING OF EXPERTS IN CONSERVATION AND MAINTENANCE OF CULTURAL HERITAGE IN CAMBODIA

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Cambodia has a huge cultural heritage, in particular Angkor, with its archaeological park of more than 40,000 hectares of tropical forest and the gorgeous remains of the capitals of the Khmer Empire, which was included by UNESCO in the lists of world heritage in 1992.

At the University of Palermo many professors and research laboratories operate in the field of conservation and restoration of cultural heritage, a network that includes both art historians and scientists, who manage a degree course in Conservation and Restoration of Cultural Heritage.

Under such premises, the Ministry of Culture and Fine Arts and the Apsara National Authority of the Kingdom of Cambodia, on one side, and the University of Palermo, Italy, on the other side, signed a cooperation agreement in the field of conservation of Cultural Heritage on February 2010. In June 2011, in the framework of such agreement, the Italian Ministry of Foreign Affairs-DGCS and the University of Palermo provided financial support to a post-graduate program for training of experts in conservation and maintenance of Cultural Heritage, the program was called Training International Action for Conservation and Restoration of Iconographic Assets (Tr.In.A.C.R.I.A).

Twenty trainees were selected by the Cambodian party, of which fifteen were archaeology graduates, four architecture graduates and one a graduate from Tourism Management. The training activities started in December 2011 and ended in June 2014. The intensive program, developed over 16 months, consisted of 8 hours per day: 3 hours of lectures given by professors of the University of Palermo and 5 hours in the restoration laboratory, working on artifacts of stone, wood and metal collected from the stores of the Angkor Conservation in Siem Reap, under the responsibility of Italian senior restorers graduated at ISCR or OPD, according to the theoretical approach to restoration of Cesare Brandi.

At the end of the course all the students defended a final report on the complete restoration of a piece of art. They achieved the qualification of expert in conservation and maintenance of cultural heritage and a diploma supplement according to the European standards. The University of Palermo entrusted the Cambodian party with a Laboratory equipped with instruments and tools to continue the restoration activities beyond the cooperation program. Furthermore, during the training activities in the laboratory, the student restored more than one hundred artifacts.

The effectiveness of the Tr.In.A.C.R.I.A. Project was clearly evidenced by the evaluation of the Unesco Committee at the end of the 21st Technical Session of ICC, held in Siem Reap on June 2012: “This program has proved to be successful in every sense of the word”.

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Fig 1 The twenty Cambodian trainees

Fig 2 Training in the restoration laboratory

Fig 3 A view of the showroom of the restored artifacts
I was trained as an artist and conservator in Chile. First a four year BA in Fine Art with a specialization in Restoration, the latter, very much influenced by the Italian and Spanish tradition. A University exchange programme in London and a Diploma in Cultural Management summed up a total of six years of formal training aimed to tailor a comprehensive career in the field of art, its conservation and display.

Despite six years of study, and lots of working experience, imparity of international qualifications is still an important issue, making the process of consolidating my career slower.

The situation has deteriorated further for the new generations as the programme where I studied no longer exists. Instead there are many new general postgraduate programmes, only one undergraduate and a specialised technical training in conservation.

I have been away from the academic world for a long time now, working in private practice conservation and sometimes public projects. Education is also on the agenda as I can see that there is a true need of specialist up to date conservation training.

Since the education offered in Chile for this specific field is limited, I have had to travel as much as possible to keep up to date. This has meant excellent specialised training experiences and, most important, practising first hand with what we would usually learn from books or the Internet.

It might be worth mentioning that I’m currently at Tate as an intern for one year, funded by the Chilean Government and a private foundation and am hoping to bring back new ideas and collaborative projects that will help raise the standards in the conservation field.

From my own experience, short courses and work experiences seem to have been more beneficial in terms of learning and a great tool for networking. All this involves a lot of energy and resources, and the outcome is probably narrower than teaching a group of hungry conservators in their own context. Nevertheless the personal experience is equally important, especially when it comes to sharing or trying to replicate that experience to others.

I can personally tell about successful attempts for introducing widely-known workshops, coming for the first time to South America, like the Wolbers course held in Santiago de Chile in January 2012. It was organized by CONSERVARTS (where I work as director) in conjunction with IAP (London based), hosted by a private institution, CREA, and sponsored by the Chilean-British Institute. The idea had been in my mind for some time but only started to take shape after I met Richard Wolbers at his course in London, this time funded by the Chilean Government.

Of those who attended the course, there were professionals from Argentina, Ecuador, Peru and Chile. The quality and learning environment was outstanding. The following years the course travelled to Peru, Argentina and Brazil.
It is important to mention that setting this up was not simple. The materials required were hard to find and dangerous to transport. Everything had to be translated and interpreted simultaneously. The general public is not familiar with technical English and also many of the new techniques developed in other countries are still a few years away from us.

Chile and the other countries in South and Central America are all relatively new countries, as we know them now. Conservation was only introduced a few decades ago, and since the respective countries are all geographically wide apart progress has been slow.

The cultural development that had been completely undermined for many years is now trying to catch up with an international fast paced artistic sector and it is crucial that we do this in a more serious and well-established training system, both academic and through practical workshops.

Chile is undergoing major changes in its Education system and we must support that change now, starting with exchanges and new perspectives. More specific training is needed at a specialist level. It is possible, it is positive and there is a lot to be done.

Fig 1 Wolbers Workshop
Fig 2 Presentation of Wolbers Theory
Fig 3 Lecture Session
CONSERVATION EDUCATION & TRAINING IN CHILE

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Conservation training started in Chile in 1984 with the first course of conservation training delivered by Gael de Guichen (ICCROM) in collaboration with Dirección de Bibliotecas Archivos y Museos (DIBAM). For many of the participants it was their first introduction to the important matter of conservation. At the same time Guillermo Yoiko started with the National Center of Restoration, which offers short courses and practical session to students. The first programme in conservation was offered by the Pontificia Universidad Católica but it and the programme at the Universidad del Desarrollo (2009-2012) were both closed in 2012.

Today you study conservation as a part of the History of Art programme offered by the Universidad de Chile (Licenciatura en Teoría y Historia del Arte), which is a state university and in the private University Sek. (Licenciado en Historia del Arte, Conservador y Restaurador de Bienes Culturales). Both programmes have a good teaching body.

The Universidad de Chile also has a Post Graduate Programme in Restoration. I completed the programme and directed it from 1998 to 2011. The Art School has an area dedicated to heritage and conservation studies in the department of ‘Teoría e Historia del Arte’ with practical sessions during the classes. It is a more intensive form of study than earlier programmes. It has been involved in helping in the restoration and conservation of heritage damage in the earthquakes of central Chile 2010 and 2014 Iquique, which I co-ordinate. It is currently part of the ‘licenciatura’ but we are working to make a 5th year with a professional ending in heritage conservation study.

We also have a number of private technical schools DuocUC in Valparaiso and Escuela de Artes Aplicadas el Fuego Santiago. The private Universidad Finis Terrae has also introduced a Master in Restoration, which works well. The curriculum and areas of study are very similar across most conservation programmes in Chile. The private Universidad de los Andes also offer a Master in Heritage, which includes a general overview of conservation studies. As you can see we have lot of private universities offering conservation programmes, which is good business.
In Chile we have good conservators and restorators who began their studies in Chile and many who on graduation received a scholarship (Beca Chile) to continue their studies outside the country. Many students go to study in Europe and the US as well as Australia. That is fantastic; when I was young it was very difficult to do so and I was very lucky to go to Mainz, Römisch Germanische Zentral Museum to study.

Now the world is a big classroom we can study conservation together and share our knowledge. We should all work together to make the study of conservation a possibility for everybody.
PARTICIPATIVE SIGNIFICANCE ASSESSMENT OF CULTURAL HERITAGE IN COLOMBIA

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In 2013, ICOM Colombia in collaboration with the Faculty of Cultural Heritage of the Universidad Externado de Colombia and the Program of Strengthen of Museums of the Ministry of Culture, and funding by Ibermuseos, developed a project to work on the ‘significance of cultural collections’, which was a topic that had not been tackled in depth in Colombia.

The project was initially intended to involve the community in the process of ‘significance assessment’ and to boost the interdisciplinary work in Cultural Heritage. It was quickly realized that most of the assessment procedures regarding the significance of collections were carried out by specific professionals according to established and institutionalized precepts and left the indigenous community as spectators rather than participants.

Thus, the project was started with a call for examples of good practices in museums regarding the involvement and participation of communities in the appropriation of cultural heritage with the intention of selecting the best eight experiences according to the specific focus of the project.

A group of professionals from different parts of the country identified a set of minimum standards significance minimum concepts based on the eight examples of best practice. In addition the group considered the reasons to why ‘significance assessment’ was valuable to the different types of museums and cultural organizations and its relationship with preventive conservation.

As a result a methodology was developed called System of participative significance assessment for collections of museums and cultural organizations. It proposed five steps to orientate the work of the institution alongside four categories of value (aesthetic, historical –documental, symbolical-religious and potential of research) and factors that could enhance or detract from the value such as social representation and relevance.

It also presented the assessment as an integral part of the working plan of an institution, which should be closely related to its mission and vision; it is intended to develop a participative assessment with communities as “owners” and “users” of cultural heritage; it proposed the development of a hierarchy created around the value of an artefact that would be used to plan and orientate the decision making process and prioritize the actions of the institution.

This methodology was the first step in the process of assessing value and needs in Cultural Heritage. However in order for it to be an effective tool for cultural organizations across the country it was necessary to develop a second stage in which the strengths and weaknesses of the methodology could be evaluated. A consultancy project was conducted during the current year in which the methodology was applied and validated to assess significance of material and immaterial heritage.
(buildings and Cultural manifestations). During the project, it was necessary to adjust certain aspects of the methodology when evaluating specific types of cultural heritage and most importantly to create complementary procedures in order to consult the indigenous community with regard to their opinion on the value and significance of their cultural heritage.

One of the most valuable outcomes was the positive and active response from the indigenous community who have felt engaged with the project throughout all the process and played a crucial part in the assessment of significance. Developing projects that engage people is very important to empower through identity, historic memory and cultural heritage; giving people the power to participate in making decision process creates social capital and develops sense of pride about its own values and goods; The importance of their involvement is crucial for the comprehension of what cultural heritage is and the role of the society in its preservation, so it is also an effective way to decrease the lack of representation and consequent vandalism against Cultural Heritage.
A METHODOLOGY OF FOSTERING PARTICIPATIVE PROCESSES IN COLOMBIAN CULTURAL PRESERVATION

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The Museo de Arte y Cultura Casa Bella is a community museum aiming to provide a social and cultural awareness environment. Its priority is the development of activities which can help local people to understand, appropriate and preserve their cultural heritage. Achieving greater social and cultural inclusion is the target. This inclusion becomes tangible through representation, participation and access of people or communities that are usually excluded. Thus, the museum acts as an agent of citizenship, capacity building, empowerment and cultural awareness, helping to improve the quality of life of locals through the validation of their cultural heritage.

Casa Bella is aware of the need and importance of continuing training, supporting and assisting communities through a joyful, educational and interactive process, encouraging the appropriation, awareness, promotion and dissemination of the Colombian cultural heritage. The museum focuses its activities specifically to groups who are eager to develop their understanding of their origins and the roots of their social structure and cultural practices.

Casa Bella is special because it goes beyond a conventional museum, which present and exhibit objects; it is an environment for ‘gathering’ and promoting social experiences. By participating in special projects designed for engaging local people, inhabitants can see Casa Bella as an active scenario of their culture, memory and everyday life. This direct interaction between people and their roots permits sensorial and deep experiences, reflecting the Boyacense’s essence of sharing living experiences with love, caring and respect.

The museum has actively engaged the communities in the recognition and valuation of peasant cultural heritage, which has been shaped by the identity of our ancestors and Boyacense’s idiosyncrasies. Over the years this institution has created an ambience of communication and relationship. It is concerned about including and engaging its audiences with their history. It is focused on valuing assets that many children are no longer able to recognize but which are ingrained in our essence as human beings and are the anthropological roots of our everyday social dynamic.

Within this scenario promoted by Casa Bella, cultural heritage is understood as fundamental for helping to strengthen social cohesion and critical thinking, promote personal development, and increase self-confidence. Cultural heritage is a key element for creativity, in all areas of human activity, as it is the outcome of local cultural production. This understanding leads people to protect, defend, promote and preserve their heritage. This in turn helps to reduce the risks faced by much cultural heritage as a result of the rapid transformation of our societies.

The changes which are leading contemporary methodological approaches for working in museum environments highlight the role of the ‘new museum’ as an environment for community-memory-
territory interaction. This interaction demands more than people visiting the place; it offers opportunities for people to build the place as their place. The museum is a field for constructing identity, rescuing and safeguarding memories, promoting cultural practices, reinforcement of the importance of cultural heritage preservation for the development of sustainable strategies, an environment for capacitating people for being citizens and thus being able for help build a better tomorrow for themselves. With innovation, creativity, new methodologies including living experiences, projects designed according to the local context, and promoting effective social engagement, Casa Bella has worked to fulfil its role in promoting, together with local communities, the preservation of the Colombian culture.

Further information: http://www.youtube.com/watch?v=91WMVIAoQEI
RAISING THE EFFICIENCY OF MUSEUM STAFF IN EGYPT

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The conservation profession has multi-disciplines aimed at developing greater knowledge of collections, materials science, cultural context, history of technology, terminology, ethics, history of conservation, deterioration processes, conservation treatments, preventive conservation, health and safety, analytical technologies, treatment materials and methods and information technology. Training of museum conservators should develop appropriate skills and abilities for the practical application of that knowledge. At the same time the field of conservation has a limited number of institutions currently offering suitable professional training and education programs. Currently, Egypt suffers from poor management of people and a shortage of well-trained and skilled researchers and experts when compared to breadth and depth of Egyptian heritage. Antiquities authorities and non-governmental organizations in Egypt need to work more effectively with international organizations to deliver training programs in order to raise the standard of collections care. Museum conservators need to keep updated with rapid changes in technologies and methodologies and to be engaged with local and international organizations, working in the field, to develop their profile and build networks. In order move in this direction I have coordinated some high quality education and training activities in order to raise the efficiency of museum conservators in Egypt in recent years.

From 4th to 14th November 2012, a training course on ‘Scientific Documentation and Imaging Techniques’ was organized at the conservation center of the Grand Egyptian Museum (under construction). The course was organized by Japan International Cooperation Agency (JICA) - project for the Conservation Center in the Grand Egyptian Museum in collaboration with the Arabic Institute for Conservation of Historic and Artistic works. That training course aimed to provide necessary knowledge and techniques of scientific documentation and analysis for conservation leading to the introduction and proper application of these techniques in the daily work at GEM-CC conservation laboratories. Instructors in the course have a diversity of scientific backgrounds allowing them to introduce integrated knowledge and practical experience in the fields of Conservation Science, Advanced Imaging Techniques, 3D Data Acquisition and Analytical Imaging Spectroscopy using cutting-edge scientific documentation and analysis methods. The course was instructed by Dr. Austin Nevin (the coordinator of ICOM-CC Scientific Research Working, Prof. Yasunori Matsuda (JICA Expert in Conservation, Technical Chief Adviser of GEM-CC Project), Ibrahim El-Rifai (head of...
Non-Destructive Investigation Techniques, CULTNAT), Anna Serotta (Conservator, Objects Conservation at the Metropolitan Museum of Art), Prof. Gianluca Valentini, Prof. Rinaldo Cubeddu, Dr. Daniela Comelli, and Anna Cesaratto (Dipartimento di Fisica, Politecnico di Milano). The trainees included forty conservators and conservation scientists who were GEM-CC staff-members. The trainees were able to perform scientific research on some of the important artifacts at the Grand Egyptian Museum including the Tutankhamun Collection. Ten scientific posters were produced as outcomes of the course and JICA has supported some trainees to travel and present their work at international conservation conferences.
On Sunday 3rd Feb 2013 the Arabic Institute for Conservation of Historic & Artistic Works (ArIC) also organized a Workshop on ‘Museum Environment – Monitoring strategies and their implementation’ at Bayet Alsennary for Science & Culture & Arts in Cairo instructed by Prof. Hannelore Roemich (Coordinator of ICOM-CC Glass Working Group). The teaching module introduced participants (museum staff) to all relevant issues of the museum environment: temperature and relative humidity, gaseous and particulate pollutants, and light. The essential role of these parameters in the process of deterioration of cultural property was also investigated. Guidelines for storage and display of art objects were reviewed taking into account the interaction of historic materials with their environment.
On 5\textsuperscript{th} - 7\textsuperscript{th} March 2014, the course ‘Conservation Reports and Academic Papers’ was organized by Japan International Cooperation Agency (JICA) - project for the Conservation Center at the conservation center (at the Grand Egyptian Museum) in collaboration with the Arabic Institute for Conservation of Historic and Artistic works. The course was instructed by Dr. Austin Nevin \textit{(the coordinator of ICOM-CC Scientific Research Working)}, Dr. Abdelrazek Elnaggar (General Secretariat of ICOM Egypt), Prof. Yasunori Matsuda (JICA GEM-CC Project), Ibrahim El-Rifai (CULTNAT).

The course aimed to develop the skills of museum staff (conservators/conservation scientists/curators) to conduct scientific research & publishing more efficiently and successfully whilst at the same time creating a scientific research environment and team in GEM through competition/motivation processes. It is hoped that an outcome of this will be to establish the role of GEM-CC scientific research in Egypt and the Middle East thus improving the knowledge and skills required by museum staff for writing and publishing their own scientific research.
HAVANA

HERITAGE CONSERVATION FOR CHEMISTRY STUDENTS IN HAVANA

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Young people who are following a career in the exact sciences are often unaware of how their specialism might be linked to the arts. This paper briefly describes the course designed for students of Bachelors in Chemistry and Radio Chemistry at Havana University whose main aim from a professional point of view was to develop a connection between science studies and the basic principles of conservation alongside an understanding of the materials used in the creation of cultural artifacts.

In recent years there has been a development in conservation teaching and education. This has resulted from a number of causes including developments in modern art and the characteristics of new materials, environmental conditions and climate change, the increasing deterioration of the cultural artefacts, new concepts applied to conservation and the increasingly close ties between experimental science and conservation concepts.

Part of the Bachelor in Chemistry and Radiochemical programme was aimed at developing the an understanding of the materials used in the creation of cultural artefacts, the physical and chemical processes that impact on their degradation and the procedures available for their identification.

Two study programs where organized and included conferences, workshops, seminars and the opportunity to meet specialists visiting the institutions, which included the Chemistry and Archaeometry Laboratory of the Historical Office of the city, the Conservation and Restoration Laboratory of Antonio Núñez Jiménez Foundation, the Museum of Fine Arts, the Laser Laboratory of INRE, and the Colon Cemetery.
The focus in the first year of the BS degree in chemistry is on the identifying and understanding the chemical processes taking place in the deterioration of the cultural materials such as paper, ink, photographs, paintings, moving film, stone and internal alongside the impact of external

The final year of a degree in radiochemistry focuses on the physical-chemical processes involved in the processes of deterioration, cleaning, restoration, the characteristics of the materials and their identification through nondestructive methods of analysis.

As a result of the conservation related opportunities provided we have found that students learnt quickly and developed an enthusiasm for focusing their studies on conservation related issues. They are also keen to share their enthusiasm and knowledge with their colleagues, which has resulted in an increase in student numbers, which promises a strong future for the programme as well as conservation practice.

Fig 1 Practices in paper restoration laboratory

Fig 2 Practices in Colon Cemetery.
The National Library of Jamaica is the primary library for acquiring, preserving, conserving and making accessible the history of the people of Jamaica in a range of formats including print, digital media and audio-visual resources. The library was established in 1979 and the majority of the collection emerged out of the West India Reference Library (WIRL), 1879, which was founded as a section of the Public library of the Institute of Jamaica.

The library has several departments, one of which is Preservation and Conservation which maintains and cares for the paper-based material in the library. These include books, maps, prints, newspapers, manuscripts and photographs. This responsibility entails environmental monitoring of the library’s collections/reading rooms, repairs to material, book binding, deacidification processes, treatment processes and mounting exhibitions.

The Preservation and Conservation department which was originally called the Bindery is an extension of the West India Reference Library. In the early years the focus was mainly on book binding, however in the early 1990s this focus shifted to include conservation. There are no formal conservation schools in Jamaica and because of this a former Director of the library who had an interest in conservation sought opportunities to have the staff trained in this area. The first training in conservation was at Camberwell College, London. Two persons from the library were sent to this institution for training. Two years later two members of staff were sent to Venezuela for training where they were taught how to mount prints and to repairs maps. The training period in Venezuela provided an invaluable collaborative opportunity for the Bindery. The staff members from Jamaica were taught by conservators from Venezuela as well as by a Jamaican who had studied conservation in Canada and a conservator from Sweden. The connection was made possible by a former Director and Archivist. They were taught various aspects of conservation one of which was the rehinging of leather covers with Japanese tissue.

The techniques taught during the overseas training opportunities have been passed down to new generations of staff who have come to the Department. Unfortunately a few of the older persons
have passed on and most have retired. There are two senior persons who remain in the department
to date, and they are involved in the training of new persons. Many persons have been trained at
the National Library and have gone on to work at other institutions, one example being the
University of the West Indies, Mona, Jamaica.

In 2009 the library was awarded a grant from the United States Ambassador’s Fund for Cultural
Preservation. The grant (in the amount of US$33,500) made it possible for the library to commission
two conservators from the Midwest Art Conservation Centre (MWACC) to train staff and teach new
techniques. The new techniques taught included how to make Klucel-G tissue which is used to
repair onion skin manuscripts.

Fig 1 General Layout of Conservation Laboratories

Fig 2 Drying Racks
The broader Middle East and North Africa region is home to many significant historical photograph collections, yet their preservation is threatened by the dearth of formally trained local photograph conservators and photograph preservation professionals.

Following a successful 2009 pilot, the Middle East Photograph Preservation Initiative (MEPPI) was launched in 2011 to address this need. It is led by the Arab Image Foundation in Lebanon, and the Getty Conservation Institute, the University of Delaware and The Metropolitan Museum of Art in the United States. This strategic initiative seeks to improve the awareness and preservation of the region’s rich photographic heritage, by identifying significant photograph collections, providing basic preservation training, and building a strong network of conservation professionals.
Since its inception, MEPPI has provided training for 54 institutions and collections in 16 countries, helping to preserve more than 15 million photographs. Participants have included individuals representing national archives and libraries, ministries, universities, as well as museums and private collections. At a time when many countries in the region are subject to political crises and economic difficulties, such training is all the more urgent.

The three year-long courses –taught in 2011-2014 in Beirut/Rabat, Abu Dhabi/Istanbul, and Amman/Beirut– began with a workshop covering topics ranging from identification of photographic processes, principles of image formation and structure, and storage and housing, to digitization best practices, advocacy and emergency preparedness and response. The workshop was followed by a distance-mentoring period with practical assignments through which participants were encouraged to apply the skills learned at their institutions, before reconvening for a follow-up meeting to strengthen teachings and share accomplishments and challenges.

Core lectures and hands-on demonstrations are taught by Bertrand Lavédrine (Centre de Recherche sur la Conservation des Collections, France), Debra Hess Norris (University of Delaware Department of Art Conservation), Nora Kennedy (Photograph Conservation at The Metropolitan Museum of Art), Tram Vo (Getty Conservation Institute), and Klaus Pollmeier (Anhalt University of Applied Sciences, Germany).

MEPPI alumni have reported significant improvements in storage and housing conditions, as well as in documentation and digitization of collections, often despite the many financial and administrative challenges they face within their institutions. By bringing together collection custodians from diverse countries and institutional backgrounds, MEPPI has also helped to strengthen professional networks both within and across institutions.
Among the most significant successes of MEPPI is the empowerment of those trained, giving them the skills and confidence to further their professional growth and become local experts in the field. Following the course, two MEPPI alumni chose to pursue graduate programs in conservation and museum studies at Camberwell College of Arts and George Washington University.

Since 2011, MEPPI’s parallel research activities have been led by the Arab Image Foundation, and have resulted in mapping and documenting some 300 significant institutional and private regional photographic collections. These collections represent the broad spectrum of photographic formats, dating from the 19th century until today. An online directory is being developed to make this information available to researchers.

Significant progress has been made since MEPPI was initiated, yet it remains crucial to continue building upon its foundational efforts in order to achieve a lasting impact, both in creating a body of expertise, as well as in spreading an awareness of the significance and value of photography as a historic and contemporary record. For its next three-year phase, MEPPI will therefore hold further advanced workshops and a symposium that will bring together MEPPI alumni, collection care professionals and decision-makers – an essential step to ensure the advancement of preservation practice and the long-term sustainability of the broader Middle East’s photographic heritage.

**MEPPI is supported by a grant from The Andrew W. Mellon Foundation with additional funding from the Getty Conservation Institute.**

*MEPPI is also grateful to its other funders and in-kind supporters including: Tru Vue Inc., the University of Delaware Department of Art Conservation, The Metropolitan Museum of Art, the Better Image, the American University of Beirut, the National Library of Morocco, NYU Abu Dhabi, SALT Istanbul, Darat al Funun Amman and the National Library of Jordan.*
A NEW APPROACH TO EDUCATING CONSERVATORS OF ISLAMIC MANUSCRIPTS

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Islamic manuscripts constitute a repository of enormous cultural and intellectual value and number in the millions. Yet currently there are no educational programs which focus on their specific conservation issues.

Conservators of Islamic manuscripts currently face significant obstacles in order to get proper training. For many would-be conservators in Africa and Asia, educational opportunities may be limited whereas programs in North America and Europe are largely directed towards the conservation of western manuscripts. These conservation approaches are often not appropriate and may even be harmful to their Islamic counterparts.

To address the need for an articulated and directed approach to Islamic manuscript conservation a curriculum with this particular focus has been written for a two-year program of education. Development of the curriculum was supported by the International Islamic University of Malaysia (IIUM) and The Islamic Manuscript Association (TIMA).

The curriculum is based on a comprehensive list of the concepts, skills and methodologies a conservator of Islamic manuscripts would need to begin his/her career. These are grouped into seven instructional modules which would constitute the first year of the program. Lectures are provided alongside hands-on, discovery-based activities in the first year. In the second year, treatment skills and conservation applications for display and preservation are deepened through engagement with larger projects undertaken in cooperation with local manuscript-holding institutions. The curriculum is developed around clear student outcomes and includes activities, assessments, a bibliography and suggested readings for each module. Clear guidance is provided on how the curriculum could be used and any potential difficulties that might be experienced.

The intent of the curriculum is to provide a starting point in this critical area of conservation education with ideas and materials that can be adapted to different groups of students in different situations. Aspects of the program could be used, for example, to enhance manuscript conservation programs in Europe and the U.S. when a student there might wish to focus on Islamic material. More importantly, some version of the total program could be set up in universities such as IIUM that are more accessible and affordable to students outside of Europe and North America. A further innovation of the curriculum is that the modules in it have a partial independent integrity which would allow them to be taught on their own. Many conservators working in non-western collections of Islamic manuscripts have neither the time nor the resources to take two years to undertake a full program of study. But a module could be taken to a manuscript-holding institution and taught to the conservators there in a relatively short period of time. With support, the full program could be taught module by module but stretched out over more than two years.

In November 2013, conservation staff from Malaysian institutions with Islamic manuscript collections enthusiastically participated in a symposium in the International Islamic Heritage and Sustainable Conservation Research Cluster of IIUM in which parts of the modules on Documentation and Ethics and Paper were taught.
The curriculum is expected to be available on the IIUM and TIMA websites before the end of 2014. Before then, anyone interested can contact the authors.
On December 2011, an international Seminar was organized at the Coordinación Nacional de Conservación del Patrimonio Cultural, Instituto Nacional de Antropología e Historia (CNCPC-INAH), in order to evaluate the impact on participants from Latin America and Spain who had attended the International Course on Japanese Paper Conservation (JPC), a course jointly organized by the National Research Institute for Cultural Properties in Tokyo and ICCROM since 1992. This Seminar was organized within the framework of ICCROM’s LATAM Programme for the Conservation of Cultural Heritage in Latin America and the Caribbean. The conclusion of this seminar identifies the importance of incorporating materials, tools and Japanese paper conservation techniques into Western paper conservation and their application, directly or with relevant modifications, to the Latin American context.

As a result of the Seminar, the first International Course on Paper Conservation in Latin America. Meeting the East took place in October 2012, jointly organized by CNCPC-INAH, the National Research Institute for Cultural Properties and ICCROM, aimed for paper conservation professionals from Latin America and the Caribbean. Considering the number of applications and the great interest shown by the participants in the two preceding years (2012-2013) combined with the need to expand and consolidate knowledge in this
field, this year the third course will be held in the CNCPC-INAH, thanks to the generous contributions from INAH and the National Research Institute for Cultural Properties. The purpose of this course is to provide the basic tools of Japanese materials and techniques of paper conservation and improving the participants understanding of the basic characteristics of the Japanese paper tradition. The course also aims at offering opportunities to build bridges between the Japanese and the Western paper conservation traditions and to assess the applicability of the Japanese approach, materials and techniques also to non-Japanese cultural heritage with particular reference to Latin-American paper heritage. Local tools and self-made materials that may replace the original Japanese are also discussed.

Fig 2 Applying paste to Japanese paper
Finally we wish to promote the exchange of experience and information in Latin America and the Caribbean on paper conservation. The course is an intensive two and a half week programme combining theory and practice, through lectures and practical work. The teaching team include Japanese and Latin America instructors from leading institutions:

**General Coordination:**
Marie Vander Meeren, Senior Paper & Book Conservator, National Coordination of conservation of Cultural Heritage, National Institute of Anthropology and History, Mexico.
Email: marievdm79@yahoo.com

**Coordination of Japanese team:**
Masato Kato, Senior Researcher, National Research Institute for Cultural Properties, Tokyo, Japan.
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**Invited professors:**
Luis Crespo, Senior Paper & Book Conservator; National Library of Spain
email: luiscresporestaurator@gmail.com
María Florencia Gear, Senior Paper & Painting Conservator in Private Practice, Argentina
Email: florenciagear@gmail.com

![Japanese paper conservation techniques](image-url)
In 1968 the UNESCO opened the Latin-American center of conservation in Mexico City, which five years later became the National School of Conservation, Restoration and Museography (ENCRYM) in Mexico. The school was created by the National Institute of Anthropology and History (INAH) and it is the first school in Latin America to have a BA program in conservation. At the beginning the aim of the school was to teach professionals to restore the national cultural heritage that was the responsibility of INAH.

In 1978 the MA in Museology and the Postgraduate Programs in Museology were created. In 1985 ENCRYM introduced a BA in Conservation of Cultural Heritage and an MA in the Conservation of the Built Cultural Heritage. Between 2008 and 2013 ENCRYM offered an International Specialty in the Conservation of Photographs as a postgraduate program. This has recently been re-and amalgamated into a new archival conservation programme the MA in Preservation of Documental Heritage which will begin in August 2014

The aim objective of the BA in Conservation of Cultural Heritage is to educate professionals so that they can design and develop appropriate strategies for the conservation of cultural heritage. This is achieved through a combination of theoretical and practical assignments. The programme includes run semesters run over five years full time. The assignments are divided into five areas of study:

1. Theory and methodology of conservation
2. Conservation methodology
3. Social sciences for conservation
4. Natural sciences for conservation
5. Cultural heritage technology

ENCRYM has created an approach to teaching cultural heritage conservation through a methodology called Seminario-Taller (seminar/workshop), which combines the teaching of restoration techniques alongside the scientific and social understanding that is needed in order to make appropriate decisions regarding conservation or restoration. The Seminarios –taller are run over a six month period and are compulsory for all the students. They include:

1. Introduction to Restoration
2. Ceramics Conservation
3. Textiles Conservation
4. Wood Sculpture Conservation
5. Mural Painting Conservation
6. Canvas Painting Conservation

After the student has completed the Seminarios –taller they must choose between Metals Conservation and Paper Conservation, and during the last semester they must choose between Photograph Conservation, Contemporary Art Conservation, Books Conservation, Musical Instruments Conservation and Archaeological Artifacts Conservation.
Students are given the opportunity of two weeks professional practice each semester. have to in land practice at least two weeks each semester.
At the end of the programme the student must submit a dissertation which must to be defended in a professional exam (VIVA) with three judges, who are specialists on the dissertation topic.
ENCryM receive more than one hundred applications each year for twenty five places on the BA in Conservation of Cultural Heritage. Numbers are limited since the students develop their skills on items real cultural heritage so individual attention is essential.
In Mexico there are at two more schools which have a BA Conservation Program: The Conservation and Restoration School from Occident (ECRO) and the University of San Luis Potosí, both of them are based on the ENCryM program.
Nowadays many ENCryM graduates choose to study postgraduates programs either in Mexico or abroad. In most instances these have been positive experiences since the ENCryM system of study has provided them with a background that helps them to be competitive in other disciplines like Archaeology, Natural Science and History.
The National School of Conservation and Restoration in Mexico would welcome communication with other schools and universities in order to share and exchange experiences in teaching and educating professionals in the conservation of cultural heritage.
For more information, please contact: www.encrym.edu.mx
Fig 2 Encrym Workshop
The Italian Institute of Ancient Mediterranean Studies (ISMA), together with the Institut National des Sciences de l’Archéologie et du Patrimoine de Rabat (INSAP), the Université Moulay Ismail of Meknès (Morocco), the Italian Ministry of Foreign Affairs, other Moroccan authorities and other European Universities, is setting up a scientific and education project in Aouam (Meknès, Morocco), that will start in September 2014, and will hopefully end in two or three years. The ‘Project of valorization of the ancient mines in Aouam’ is lead by Lorenza-Ilia Manfredi, First Researcher of Italian National Research Council (CNR), with her group of co-workers.

The first step is obviously the survey, the remote sensing, and a preliminary excavation of the area of Ighram Aousser, an islamic fortress on the pre-roman mines of Aouam-Tighza. The scientific fieldwork will be followed by the fast publication of every result. But in the meanwhile, the aim of our work will be the global valorization of this site, in order to create, in a few years, a local museum and an archaeological park of these mines.

This ambitious plan is strictly connected to a clear educative purpose, strongly requested by local authorities, such as the Municipality of M’rirt, that see this as an opportunity to get over recession and social disease. Our first step in this sense will be the organization of training courses for local dwellers, focusing in particular on unemployed young people. It is very important to involve this specific social class into the museum management and the conservation of their own ancient mines, to create a strong connection between them and their own cultural heritage. The subjects will be about history, archaeology, preservation of enviromental heritage, museology and cultural management. As a result they will become familiar with a range of conservation issues; they will learn how to take care of their own museum and park and to promote them to the outside world. We hope that this will be the starting point of the cultural, touristic, and obviously economic development of the beautiful Aouam area.

We are also planning to create an educational workshop inside the museum, dedicated to schoolboys and schoolgirls of the surrounding area, with a special focus on the local liceum of Tighza. In this way, children will have a dedicated space in which to have fun while learning about the history of their homeland, thanks to specific lessons and a range of teaching aids including historical books suitable for every age, drawing laboratories, videos and educational games.

The global purpose is obviously the involvement of local people in managing the cultural heritage and promoting the conservation and touristic development of this area of Moroccan and in doing so discovering that culture and valorization can provide a new and stimulating answer to recession.
Tambo Colorado is one of the most impressive Inca sites in the southern Peruvian coast, due to its stunning architecture, extraordinary pictorial decoration with red, yellow and white bands, and strategic location in the Qhapa Ñan (Great Inca Road). Unfortunately, Tambo Colorado has not been conserved nor protected, and very exposed to environmental deterioration factors and earthquakes. The Research Project Tambo Colorado has recently applied an interdisciplinary approach that includes the archaeometric analysis of pigments and mortar, recording 3d structural photomodeling; studying graffiti study and assessing the condition of structures and finishes. In this regard, transdisciplinary research provides suitable tools to conserve the site’s materiality as well as its significance.

The work has been developed in the North Palace I sector, the most complex and decorated area, where the Inca family lived during the 15th century. In this first season of work, our objectives were focused on researching the main archaeological issues of Tambo Colorad and conducting a general condition assessment:

- **Structural condition assessment**: The major structural pathologies as well as the different factors impacting on deterioration were identified. Thanks to this assessment, the areas and walls which require urgent conservation have been identified. Furthermore it was discovered that the different construction techniques had influenced the structural stability of the walls. In order to analyze the structural situation in more detail one of the most complex areas was registered using 3d modeling.

- **Finishes condition assessment**: The pathologies of the major finishes pathologies were identified, as well as the different factors that produced them. Furthermore areas that needed urgent conservation work were identified and ranked. As a preliminary result, it can be said that the identification of the materials (painting and plaster) and the techniques (pigment grain size and application method) together with the impact of the environment has influenced on the conservation proposed for the finishes.

- **Archaeometry**: The chemical composition of the wall paintings alongside the sources and areas of production have been investigated. X ray diffraction was used to identify pigments made with iron, sulfur and calcium. The yellow and red colors and yellow mural painting are possibly hematite and goethite respectively, sulfur plus calcium was used for the white painting and finally the black color identified in just one of the walls, has been identified as a unique pigment made of manganese; which is a very interesting discovery, due to the fact it hasn’t been recorded in wall paintings in the Andean area.

- **Grafitti recording**: The Tambo Colorado walls are completely cover by inscriptions, drawings and designs made by different people from different periods, most of them belong to modern times, but there are some that apparently belongs to colonial times, the recording and research will give us more information about the impact of this specific deterioration factor that will become a useful resource to value the site.
Fig 1 Tambo Colorado - North Palace I (© PRTC, 2013)

Fig 2 Recording pathologies affecting the walls of the archaeological site (© PRTC, 2013)
Fig 3 Archaeometric measuring of the wall paintings (© PRTC, 2013)
CONSERVATION TRAINING AND EDUCATION IN SOUTH AFRICA

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After completing a Master’s degree in paper conservation at Northumbria University, UK, I returned to South Africa to work in my chosen field. I succeeded in obtaining a contract position at the University of Cape Town Special Collections Library, where I am the only conservator in any discipline on staff for the whole university. As a result, although I am fresh out of my studies with little experience, I am tasked with looking after the whole collection with no guidance or support from a senior conservator or supervisor. In South Africa I am considered being at the top of my field simply as there are so few trained paper conservators.

A possible reason for this dire shortage of conservators is that this field is not widely known about, even in the art spheres, and it is impossible to study locally. Before my Master’s degree I completed a five month internship in the Conservation Unit at the Parliament of South Africa, the only paper conservation studio in the country. This was one of the few ways of receiving any training in conservation. There are some short one week courses offered by the Afrikaner Library Trust in Kimberley, Northern Cape, covering basic book repair and binding, introduction to furniture care, archive management and basic paper conservation which focuses mainly on tear repair and surface cleaning. The South African Institute also offers conservation short courses, however the focus is on object conservation. The only other option for training is to try to obtain an apprenticeship with a practicing conservator. Any formal or in depth training can only be achieved by studying overseas.

Another problem is the difficulty in expanding knowledge and updating skills. There are a number of reasons for this: lack of local training discussed above, lack of access to conservation journals and the geographical location of South Africa being far from where conferences and workshops are held, which greatly increases the cost of attending these events.

I have tried using both local and international contacts gained while studying when I require advice on a project. However, this is an imperfect system as it is difficult to convey the problem through email or with photographs, thus suggestions are often impractical. I am acutely aware that in my current situation I am missing out on the guidance that is gained through experienced supervision, which could improve my practice. My other fear is that of stagnating. Without outside scrutiny, comparison and new ideas from other conservators, locally and internationally, it can be easy to slip into bad habits.

With the conservation field in South Africa being so small it is difficult to implement better conservation training successfully and in the long term, but it is my hope that an improvement in one may advance the other. Perhaps there would be more conservators if training was locally available and, with more conservators, there may be a greater push to improve training and hold conferences and workshops.