# GIA Annual Report 2015

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Foreword
The year 2015 has been a fruitful year for the Groningen Institute of Archaeology with exciting fieldwork, new research contracts for PhDs and postdocs, 3 PhD promotions, workshops, conferences and a range of public outreach activities. Its staff members were able to obtain external grants amounting to nearly 2.5 million euro! While the basic facts and figures can be viewed on GIAs website (http://www.rug.nl/research/groningen-institute-of-archaeology/about-the-institute/annualreport), the Annual Report limits itself to highlighting major feats of GIA staff members in the field, in the laboratory and in a range of academic and societal contexts. It features key publications and staff members who tell about their fascination for archaeological research in the field and in the lab. This Annual Report is the last to present GIA research along the lines of the four chair groups that make up the GIA (Arctic and Antarctic Studies, Classical and Mediterranean Archaeology, Greek Archaeology and Pre- and Protohistory of Northwest Europe). Following up on an internal discussion in the GIA Management Team about the position and visibility of the Bioarchaeology group sparked by the 2010 external review and in anticipation of the 2016 Peer Review Assessment of the Institute, it has been decided to position Bioarchaeology as a separate Research Group within GIAs organisation, the main reason being that GIAs bioarchaeologists have developed their own research identity and in practice interact with all chair groups. This has led the GIA Management to decide that from 2016 GIA is structured along the lines of five Research Groups instead of the current four chair groups. From 2016 onwards the Annual Report will be structured accordingly. This decision will promote further interdisciplinary integration within GIA while emphasizing its bioarchaeological expertise.

1. About GIA
The Groningen Institute of Archaeology is based in the Faculty of Arts of the University of Groningen, and is responsible for all archaeological research within the university. It contributes to research agendas within the humanities by integrating research perspectives from both the natural and social sciences, and by developing and incorporating novel methodologies and theories. GIA research highlights the fact that archaeology is the only academic discipline able to investigate the development of human societies from a uniquely long-term perspective. At GIA, we are convinced that insights from the past also have relevance to present-day debates and the resolution of future challenges. GIA strives to add to the regional, national and international recognition of University of Groningen as a leading research university.

GIAs Mission
The core purpose of GIA is to:
- conduct innovative, ethically-informed research that has high visibility and impact;
- provide a supportive environment in which researchers perform at their full potential;
- effectively disseminate research results to diverse audiences in appropriate formats;

To fulfill this mission GIA organizes its research so that it can focus critical mass on:
- understanding specific periods and processes of transition within well-defined geographical regions, specifically the Mediterranean (Italy, Greece, Near East), NW Europe and the Circumpolar North;
- applying an integrated field- and laboratory-based approach to research, underpinned by engagement with diverse theoretical perspectives, and a commitment to methodological innovation.
Who are we?
The Groningen Institute of Archaeology consists of four chair groups; Arctic and Antarctic Studies, Classical and Mediterranean Archaeology, Greek Archaeology and Prehistory and Protohistory of Northwest Europe. These chair groups, in turn, link into the University of Groningen's educational departments of Archaeology and the Arctic Centre. The coordinators of the chair groups are full professors and form the GIA Management Team. One of them acts as GIA Director. The Management Team is supported by an Advisory Board composed of a representative selection of GIA personnel. Members of the technical staff support GIAs research activities and fieldwork projects. GIA also maintains laboratories in Zooarchaeology, Archaeobotany and Conservation and Material Culture Studies (LCM).
Within RUG, GIA participates in the Graduate School for the Humanities of the Faculty of Arts, providing the institutional setting for GIAs PhD training programme and the two year Research Master in Art History and Archaeology. GIA is also a member of ARCHON, the national Dutch institute for Research Master and PhD training programmes in Archaeology.

Director of GIA
Prof Dr P.A.J. Attema

Chair groups
- Arctic and Antarctic Studies (Prof Dr P.D. Jordan)
- Classical and Mediterranean Archaeology (Prof Dr P.A.J. Attema)
- Greek Archaeology (Prof Dr S. Voutsaki)
- Prehistory and Protohistory of Northwest Europe (Prof Dr D.C.M. Raemaekers)

Research coordinator
Dr S.L. Willemsen

Coordinator of GIA PhDs
Fester Possel

Management Team
Prof Dr P.A.J. Attema (chair), Prof Dr R.T.J. Cappers, Prof Dr P.D. Jordan, Prof Dr D.C.M. Raemaekers (in September replaced by Dr J.H.M. Peeters) and Prof Dr S. Voutsaki.

Advisory Board
Prof Dr P.D. Jordan (chair), Dr C. Cakirlar, F.B.J. Heinrich MA, MSc., Dr L. de Jong, Dr P.M. van Leusen, Dr M.M.J.E. Loonen and M.A. Los-Weijns.

Students from the Groningen Institute of Archaeology digging test-trenches.

1 Prof Dr Daan Raemaekers was leader of this Research Group until he took over as Vice Dean of the Faculty of Arts in September 2015; Dr Hans Peeters is now acting leader of the PP Research Group, and serves on the MT.
Arctic and Antarctic Studies

The AAS Research Group is housed at the Arctic Centre (AC), which was founded in 1970, and conducts inter-disciplinary investigations of the world’s higher-latitude regions. Arctic Archaeology plays a central role in AC operations, and staff also conduct research in biology and other subjects, strengthening its unique inter-disciplinary profile. The AC consists of two full-time academic staff (Professor Peter Jordan is Director, and has archaeological research interests; Dr Maarten Loonen is a biologist), as well as a diverse community of researchers, PhDs, a postdoc, plus a secretary and research-network coordinator. The AC plays an active role in all the main international Polar Science organisations: its staff are Netherlands National Representatives (and Expert Advisors) in Scientific Working Groups of the Arctic Council; Conservation of Arctic Flora and Fauna (CAFF); Arctic Monitoring and Assessment Programme (AMAP); Sustainable Development Working Group (SDWG). This work is supported by contracts with the Netherlands Ministry of Foreign Affairs, which funds key staff (Steenhuisen; Scheepstra) and supports the Netherlands Arctic Station in Spitsbergen (managed by Loonen). AC staff are also funded by the NWO to represent the Netherlands in the Council Meetings (and various Working Groups) of the International Arctic Science Committee (IASC). They are also frequently contacted by government ministries for expert advice and to take part in international delegations. The AC also became involved in two new ERC Horizon 2020 projects: EU-PolarNet, which started in 2015 (Scheepstra), and ArchSci2020 (Jordan), which was funded in mid 2015 and will start in 2016. ArchSci2020 is an Innovative Training Network, and will bring a total of 6 new PhD projects to Groningen between 2016 and 2020.
Classical and Mediterranean Archaeology

The chair group of Classical and Mediterranean Archaeology (CMA) has a longstanding and firmly established tradition in Italian field archaeology. Its interdisciplinary projects in Central and South Italy combine excavations with landscape archaeological approaches to study the dynamics of Italy’s urban and rural past in a long-term perspective. Covering the period from the Bronze Age to Late Antiquity, its researchers integrate geoarchaeological, palaeoecological and material culture studies to contribute to current understanding of the formation of early complex indigenous societies, interactions with the colonial Greek and Roman world, and Roman Republican and Imperial urbanization. In conducting this research there is a central focus on the improvement of field and analytical methods and a strong interest in socio-economic and demographic aspects. The staff of the chair group conducts major and internationally renowned landscape archaeological projects such as the Pontine Region Project in Central Italy and the Raganello Archaeological Project in South Italy and works on the integration of large survey datasets to compare regional settlement and land use dynamics in time and space over the Mediterranean and to facilitate demographic and economic analysis. From 2006 it has been a leading partner in the international excavations at the ancient Latin site of Crustumerium, near Rome and is currently involved in a series of international exhibitions. Publications on the large-scale excavations conducted at the protohistoric settlement of Satricum Central Italy and Francavilla Marittima in South Italy are underway. The chair group has established strong international networks, has a strong track record in obtaining research funding, and attracts substantial numbers of master students, PhDs and postdoctoral researchers, all of whom play a central role in its activities.
Greek Archaeology

The research chair of Greek Archaeology was established in 2011. Its research covers the archaeology of the Greek World in the broader sense, but also has a clear focus on the prehistory of the Aegean and the Hellenistic and Roman periods in the eastern Mediterranean and the Near East. Members of the chair group direct or participate in projects in Ayios Vasilios and Halos (Greece), Beirut (Lebanon), and maintain an explicitly theoretical and interdisciplinary approach, combining archaeological, bioarchaeological, but also historical, iconographic and epigraphic data. Mortuary studies form a central theme in the chair group, as well as household and landscape archaeology, the study of cult and religion, and analysis of architectural monuments and imagery. Questions of social change (the emergence of complex urban societies, but also periods of crisis and decline) and the redefinition of identities in increasingly connected worlds also occupy a central position in research activities. Greek Archaeology researchers engage in public outreach and study the history and politics of archaeology, especially in countries impacted by financial crisis, political instability and conflict. They also collaborate more widely across the University of Groningen, with staff from the Departments of Ancient History and Religious Studies, and with the Centre for Isotope Research. Internationalization is also central to the chair group, which has developed close links with the Dutch Institutes in Athens and Istanbul, the Wiener Laboratory in Athens, the Athens Archaeological Society, the Greek Archaeological Service and the Archaeological Department of the University of Isparta. Greek Archaeology at GIA is quickly establishing a reputation as a centre of international excellence for methodologically innovative, theoretically sophisticated and socially engaged research.
Prehistory and Protohistory of Northwest Europe

Research of the chair group of Prehistory and Protohistory of Northwest Europe focusses on socio-cultural dynamics, and the long-term development of human-environment relations. To this end, material culture and palaeoenvironmental studies contribute to two lines of research. The first is that of prehistoric cultural landscapes, with a focus on economic and social/cosmological use and meaning of the environment. Projects on prehistoric cultural landscapes include: long-term use and perceptions of landscapes by Post-Glacial hunter-gatherers, the socio-economic role of crop cultivation within the Swifterbant Culture and the early agriculture of ‘Celtic fields’.

The second context is that of the historic coastal and maritime cultural landscape. This comprises both the terp-mound area of the northern Netherlands, as well as the medieval maritime world. Here research is focused on the occupation history of the terp-mounds and peat districts, and also the ways in which local inhabitants were connected in wider regional and international spheres of interaction (e.g. through a focus on ship-wreck archaeology and exchange networks).

This chair also provides a home for GIAs bioarchaeological research cluster, which includes zooarchaeology and archaeobotany. The current activities of the bioarchaeology cluster extend beyond the Netherlands, and include projects in the Near East and Egypt. This wide international coverage facilitates productive cross-cultural comparison of key processes including plant and animal domestication and transhumance and food-production strategies; this serves to strengthen research methods and improves understanding, both in the Netherlands and abroad.

Given that their research operates both nationally and internationally, this group believes that it has a duty not only to conduct research of international interest, but also that it has an important role to play in communicating the relevance of archaeological research to contemporary society, both in the northern Netherlands, and internationally.
Archaeobotany

Archaeobotany is central to numerous GIA projects, most notably within the Prehistory and Protohistory of Northwest Europe chair group (e.g. the Swifterbant and Celtic Field projects, the Terp Research Group, research focusing on the maritime and coastal cultural landscape). It also contributes to other GIA chair groups (e.g. fieldwork projects of the Classical and Mediterranean Archaeology chair group) and conducts research in collaboration with a wide range of external partners. It has launched a new book series in cooperation with scholars from Kiel University: Advances in Archaeobotany. Both GIA and (inter)national colleagues are being actively encouraged to publish new research within the series.

The 2004-2009 Visitation Report highlighted that the GIAs archaeobotanical laboratory houses internationally significant reference collections. Increasing use of these collections is now being made by colleagues from Greece, Turkey and Italy. The collection is also under constant development, with the addition of numerous new specimens, and an updated taxonomy. Staff of the lab have conducted ethno-archaeological fieldwork to examine how human actions such as threshing and roasting result in lead to patterns of wear on plant remains; this work is augmenting the corpus of reference materials.

Zooarchaeology

Zooarchaeology has been central to GIA since its first inception at the Biologisch-Archaeologisch Instituut in 1920. The zooarchaeological research group investigates a large variety of past phenomena that involve the human exploitation of animal populations. Present research foci include the introduction of animal husbandry to areas west of Çatalhöyük, the introduction of domestic animals to the prehistoric Netherlands, ancient fisheries in the eastern Mediterranean, and economic systems of early urban centers. Researchers of this unit employ diverse zooarchaeological methods, including comparative osteomorphology, through to ancient DNA, ZooMS, and stable isotopic analyses. Students and staff carry out fieldwork activities and laboratory analyses in Turkey, Bulgaria and Lebanon. The staff also collaborates with a large international network, including the Environmental Archaeology Lab in
Boston University, the Department of Archaeology in the American University of Beirut, the Proteomics Lab in Manchester University, the Istanbul Archaeology Museums, and the Palaeogenetics Group at Mainz University. The unit also manages GIAs extensive skeletal reference collection; these responsibilities include curation work, development and expansion of the collection, and the provision of access and support to researchers, students, and the general public.

PhD programme
Chair groups of the Groningen Institute of Archaeology regularly have new openings for PhDs. These result from annual allocations from the Faculty, as well as national competitions and externally funded projects and international collaborations. Apart from research, PhD students at the Groningen Institute of Archaeology follow training programmes up to 30 ECTS. These programmes are typically a combination of modules offered by the Faculty’s Graduate School for the Humanities, National Research Schools, and training modules tailored to the individual PhD student’s needs. GIA offers excellent supervision, research facilities, technical support and maintains a dynamic yet supportive academic culture. It also facilitates and supervises self-funded PhD researchers.
Research Integrity

The quality of research conducted at the Groningen Institute of Archaeology is assessed in light of the highest international standards. GIA complies with the professional rules drawn up by the Association of Universities in the Netherlands (VSNU: Vereniging van Universiteiten), which can be found in the Dutch Code of Conduct for Scientific Practice. The primary values and principles enshrined in this code of conduct include a duty of care to colleagues and students, and also reliability, verifiability and independence in research. As part of appointment procedures at GIA new staff and researchers are required to declare that they are familiar with the Dutch Code of Conduct for Academic Practice and will follow it during their professional activities.

Our aims and ambitions

GIAs primary aim is to carry out interdisciplinary problem-oriented research projects in which students, PhDs, postdoctoral researchers and staff cooperate and which evolve in a spirit of collaboration with other partners, both within and outside academia. The main domains of study are within landscape, settlement, ecological and social archaeology. Currently GIA accommodates over 30 fte researchers who maintain a high output of peer-reviewed papers and books; it also organises major international conferences and is active in the valorisation of its research results. GIA research spans much of the globe, and extends over considerable time depths. Projects are typically based on primary data collected by fieldwork or analysis of collections, but also include elaboration and critical synthesis of existing datasets. As only a small part of GIAs activities can be funded by the institute, GIA staff is very active - and successful - in attracting external funding. In 2015 the GIA obtained a total of more than €2,4 million of external research funding which was used to run existing projects and also to launch new initiatives.
## Funding

### Project funding

<table>
<thead>
<tr>
<th>Name</th>
<th>Grant</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Cultural and Demographic Effects of the Great Bronze Age Eruption of Mount Vesuvius</td>
<td>NWO Free Competition</td>
<td>€748,188</td>
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<td>Fields of opportunity: crop cultivation in Northwestern Europe's coastal salt marshes, 600 BC to 800 AD</td>
<td>NWO Veni</td>
<td>€247,000</td>
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<td>Where Helen of Troy lived: reconstructing the urbanization of the Mycenaean town at Ayios Vasilios</td>
<td>NWO Veni</td>
<td>€250,000</td>
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<td>Settling with the norm? Norm and variations in social groups and their material manifestations in (Roman) Iron Age settlement sites of the northern Netherlands</td>
<td>NWO (via ARCHON)</td>
<td>€199,000</td>
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<td>Bewoning en landschapsgebruik in de vroege prehistorie</td>
<td>National Heritage Agency</td>
<td>€121,869</td>
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<tr>
<td>ArchSci2020: Archaeology on the Edge: Northern Europe and the Circumpolar World</td>
<td>EU Horizon 2020 (Innovative Training Network)</td>
<td>€766,123</td>
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### Direct funding

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<th>Grant</th>
<th>Amount</th>
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<td>Samenstelling wilde Plantenmengsels</td>
<td>Ministerie van Economische Zaken</td>
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<td>Veldkratering Menaldum</td>
<td>Province of Friesland</td>
<td>€8,310</td>
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<td>Paleotanisch onderzoek Hegebeitum</td>
<td>Province of Friesland</td>
<td>€7,944</td>
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<td>IASC Conference Sessions on Culture and Arctic Climate Change</td>
<td>International Arctic Science Committee</td>
<td>€17,000</td>
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<td>Subsidie Digitale Plantenatlas</td>
<td>Deutsches Archeologisches Institut</td>
<td>€15,000</td>
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<td>Geophysical prospections along the Via Appia (Minor Centres Project)</td>
<td>Gratama Stichting</td>
<td>€15,980</td>
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<td>Beckeringh Map</td>
<td>Groninger Universiteitsfonds (GUF)</td>
<td>€1,600</td>
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<tr>
<td>Subsidie Digitalisering Palaeohistoria</td>
<td>Groninger Universiteitsfonds (GUF)</td>
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<td>Stichting Nederlands Museum Anthropologie Subsidie Boek</td>
<td>Stichting Nederlands Museum Anthropologie en Praehistorie (SNMAP)</td>
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<tr>
<td>Data Collection</td>
<td>Norwegian Polar Institute</td>
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<td>Subsidie opgraving Westeinde</td>
<td>Province of Drenthe</td>
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<td>Bijdrage Celtic Fields</td>
<td>Province of Drenthe</td>
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<td>Project Tusschenwater</td>
<td>Waterschap Hunze en Aa’s</td>
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<td>Verbreden verwachtingskaart uiterwaarden</td>
<td>RCE</td>
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<td>Preparing Expert Evaluation Report</td>
<td>Jubileumfonds Sweden</td>
<td>€2,008</td>
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<td>Ayios Vasilios survey, grant for geophysical prospection</td>
<td>Gerda Henkel Foundation</td>
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<td>Ayios Vasilios. A survey of the palatial settlement</td>
<td>Michael Ventris Memorial Award, Institute of Classical Studies, London</td>
<td>€2,300</td>
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<td>Radiocarbon dating of Achaian tholoi</td>
<td>Institute of Aegean Prehistory</td>
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<td>Quick Scan Schiphol</td>
<td>Ministerie van Infrastructuur &amp; Milieu</td>
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<td>Advies Opgraving Sumar</td>
<td>Province of Friesland</td>
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<td>Rapport veldkartering Grote HS</td>
<td>Cultural Heritage Agency</td>
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<td>Posphate analysis near Pomor hunting hut</td>
<td>Svalbard Environmental Fund</td>
<td>€8,000</td>
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### Total funding 2015

€2,463,386
2. Research within GIA

<table>
<thead>
<tr>
<th>GIA research output 2015</th>
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<tbody>
<tr>
<td>Refereed article</td>
<td>15</td>
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<tr>
<td>Non-refereed article</td>
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<tr>
<td>Chapter</td>
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<td>Book</td>
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<tr>
<td>Professional publication</td>
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<td>Popular publication</td>
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<td>Review</td>
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<td>Edited journal</td>
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<tr>
<td>Edited book</td>
<td>1</td>
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<tr>
<td>Doctoral thesis</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>92</strong></td>
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</table>

Publications edited and issued by GIA

GIAs Annual Research Day in December 2015 the annual issue of GIs popular outreach journal *Paleo-aktueel* (vol. 26) was presented. This reports on current research by GIA staff, students and affiliates. Also noteworthy in 2015 was the fact that issues of the *Tijdschrift voor Mediterrane Archeologie* (vol. 53 & 54) appeared; both volumes were edited by GIA and consisted of papers from early career researchers, with updates on new research projects across the Mediterranean (see: http://tijdschrift.mediterrane-archeologie.nl). *TMA* enjoys a substantial academic readership in the Netherlands and Belgium.

Arctic and Antarctic Studies

The most important activity of the Arctic Centre in 2015 was the SEES.NL expedition, which was supported by funding from the NWO Netherlands Polar Programme, and eventually became the largest Dutch Polar Expedition ever undertaken. Led by Maarten Loonen, with close collaboration with Annette Scheepstra and Frits Steenhuisen, it had three primary goals: (a) to undertake intensive fieldwork in and around the uninhabited island of Edgeøya in order to measure the pace and severity of climate change impacts on this fragile ecosystem; (b) inform the wider public about the impacts of climate change on the Arctic; (c) act as a catalyst to bring together Polar scientists in the Netherlands to focus on common issues and research questions, and to develop new research initiatives via publications and funding applications. A total of 55 scientists took part, including ecological and archaeological fieldwork teams from the Arctic Centre; SEES. NL also received extensive media attention, and by highlighting the plight of Arctic ecosystems under intense pressure from modern climate change, also led to the Dutch government increasing the budget for further Polar research.
Other important developments in 2015 included preliminary fieldwork in Arctic Norway to select the location of a new long-term archaeological survey project. This will start formally in 2016 and will focus on investigating transformations in the early prehistoric societies of the European Arctic. It forms a new partnership with the Arctic University of Norway (Tromsø). Marjolein Admiraal also started her PhD at the Arctic Centre in early 2015. She is researching early prehistoric food-processing technologies in SW Alaska in the Aleutian Islands, and their relationship to the rise of maritime adaptations and local climate change; she will also undertake archaeological-science training at the BioArch facility at the University of York. Arctic Centre postdoc Frigga Kruse was also awarded a grant from the Svalbard Environmental Protection Fund to research local ecological impacts of 19th C Pomor hunters on Svalbard, with fieldwork conducted as part of the SEES.NL expedition. In 2015 the Arctic Centre was also awarded ERC
Horizon2020 funding for an Innovative Training Network (in partnership with Copenhagen, Stockholm and York). The project will start in 2016, and is called ‘ArchSci2020 Archaeology on the Edge: Northern Europe and the Circumpolar World’. It will train a new generation of 15 PhDs to apply the latest methods in archaeological science to case-studies from across the Circumpolar North. The Arctic Centre also represents the Netherlands in a further ERC Horizon2020 project called EU-PolarNet (‘Connecting Science with Society’), which is designing a new and more integrated Polar Science Plan for the EU. Finally, the Arctic Centre continued to contribute to the formation of the ICARPIII (Arctic research priorities) agenda by running sessions and giving papers at several international conferences, all linked to the theme of climate change and Arctic archaeology. This initiative was supported by the International Arctic Science Committee.

**Classical and Mediterranean Archaeology**

The group started three new projects in 2015. In the NWO funded project ‘The Avellino Event, Cultural and Demographic Effects of the Great Bronze Age Eruption of Mount Vesuvius’ three post-docs were appointed to study the distal effects of this eruption on the human environment of the Pontine plain (near Rome) combining geological, palaeoecological and archaeological approaches. This is a collaboration with the Faculty of Archaeology of Leiden University. In autumn 2015 fieldwork was started at the protohistoric salt working site of Puntone Nuova near the Etruscan site of Populonia. Over ca. 3000 m$^2$ geophysical prospections were done with Eastern Atlas (Berlin). Invasive research here is planned for 2016 with the University of Naples and The Soprintendenza per I Beni Archeologici della Toscana. A final new project initiated is the research network ‘Integrating Survey Data for the Historical Jordan, P. (2015). Technology as Human Social Tradition: Cultural Transmission among Hunter-Gatherers. Berkeley, CA: University of California Press.

This new book brings together several years’ of inter-disciplinary ethno-archaeological research, and focuses on understanding how complex interactions between social structure and human agency contribute to the development of inter-generational cultural traditions. It presents in-depth case-studies from hunter-gatherer societies living in Northwest Siberia, Northern California and the Pacific Northwest Coast, and applies new models and analytical methods drawn from evolutionary biology to better understand how individuals and communities inherit and adapt material culture traditions to new challenges and opportunities. It has been described as ‘one of the most influential books in…anthropology and archaeology of this decade’ (Antiquity Journal 2016).
Suburbium of Rome’ with two workshops. The network consisting of GIA. The La Sapienza University of Rome University, the British School at Rome and the University of Durham aims at joint grant proposals to achieve its aim of integrating large datasets. Meanwhile other projects continued. At Crustumerium (Rome) a new cluster of Iron Age and Archaic tombs was excavated in the Monte Del Bufalo burial ground and stratigraphic investigations of the giant burial mound (4000 m²) were continued. It contains a great many burials from ca. 800 – 500 BCE. Preparations were done for the first international Crustumerium exhibition to be held in Copenhagen, 2016 (collaboration between GIA, the Glyptotek at

Key publications


Copenhagen and the Archaeological Service at Rome). The NWO research program ‘Rural Life in Protohistoric Italy’ (RLP) ended formally in December 2015, but archiving and publication are still ongoing. Additional fieldwork was done in the upper Raganello basin, which presents an unusually complex depositional history. Progress was made with the new Raganello Basin Studies series, which will start to appear in 2016. De Neef will defend her PhD thesis in autumn 2016, while two other promotions on Calabria (Masci Fasanella and Ippolito) are foreseen as part of the Raganello Archaeological Project.

Work on the publication of the GIA excavations at Satricum were continued and new members could be added to the team. A successful fieldwork campaign was carried out at Satricum aimed at the study of sedimentation in the Astura valley during protohistory (collaboration with the Archaeological Centre of the University of Amsterdam (Prof. M. Gnade).

The NWO Free Competition project ‘Fora, stationes and sanctuaries: the role of minor centres in the economy of Roman central Italy’ entered its final phase. In two campaigns the study of the artefacts collected during field surveys in previous years (2012-2104) was concluded and work concentrated on publications and public outreach deliverables. A closed workshop was organised to discuss the preliminary results of the four subprojects with a group of invited specialists.

Various PhD trajectories are well underway. Van Loon’s research on the sanctuary of Campoverde in

**Highlighted**

Three contributions to the 11th International Conference on Archaeological Prospection based on fieldwork carried out in the NWO funded ‘Rural Life in Protohistoric Italy Project’ were published in a special issue of the journal *Archaeologia Polona*, establishing that GIA research is at the forefront of methodological innovation in this area: Van Leusen, P., Closing the Loop: Extracting more value out of archaeogeophysical survey in the Raganello Basin. *Archaeologia Polona* 53: 153-157; Van Leusen, P., de Neef, W. & Armstrong, K., 2015, Going Over Old Ground: What can landscape-scale magnetic susceptibility data do for me? In : *Archaeologia Polona*. 53, p. 417-420 and Van Leusen, P., Schmidt, A. & Armstrong, K., Using archaeological models for the inversion of magnetometer data. *Archaeologia Polona* 53: 575-578. These peer-reviewed publications were at the basis of van Leusen’s key publication mentioned above.

Dr Kayt Armstrong employing the Bartington MS3 susceptibility meter on-site in Calabria (Italy).
Central Italy is planned to be completed in 2017 and will result in four papers and a book. Heinrich’s research on crop husbandry in the Roman world resulted in drafts of papers currently under review. Annette Hansen started the second year of her research on the Agricultural Economy of Islamic Jordan, from the Arab Conquest to the Ottoman Period.

**Greek Archaeology**

The members of the Greek Archaeology research chair have been particularly active in 2015. The excavation of the North Cemetery in Ayios Vasilios, directed by Sofia Voutsaki, is nearly completed, and various reports and articles are in press. At the same time, a new project, the survey around the Ayios Vasilios hill, was initiated thanks to a NWO VENI grant for Corien Wiersma and a Gerda Henkel Fellowship for Sofia Voutsaki. The first campaign took place in October-November 2015; Corien Wiersma was Field Director and many students from Groningen and elsewhere participated.

Olivia Jones spent 6 months at the University of Arizona working on her PhD under the supervision of Prof. J. Buikstra; she also received an INSTAP Research Grant to do radiocarbon analysis of samples from the Petroto Mycenaean tholos at the Centre for Isotope Research, Groningen. Vana Kalenderian continued the study of the osteological and contextual data from Roman cemeteries in Beirut, Lebanon. Eleni Panagiotopoulou spent a month at the Arthur Holmes Isotope Geology Laboratory, Durham University in order to carry out strontium analysis of human remains from Iron Age Thessalian cemeteries under the supervision of Dr. Janet Montgomery, Department of Archaeology and Dr. Geoff Nowell, Department of Earth Sciences. In Halos, the study of the material excavated in 2013-2014 by Tamara Dijkstra continued, and an article on the inscriptions is in preparation.

Members of the chair were also very active in disseminating their research. Lidewijde de Jong

![GIA students surveying on the Ayios Vasilios hill.](image)
and Tamara Dijkstra organized a very successful CRASIS annual meeting on ‘Crisis: the identification, analysis, and commemoration of crises in the ancient world’. A strong delegation attended the Annual Meeting of the Archaeological Institute of America in New Orleans: Lidewijde de Jong and Tamara Dijkstra organized a panel on ‘Burial and Commemoration in the Roman Provinces’, Olivia Jones co-organized a session on ‘Preservation of Organic Remains in the Aegean’, and Eleni Panagiotopoulou presented a paper on isotopic analyses. Sofia Voutsaki co-organized a meeting on Dutch Fieldwork in the Mediterranean and the Ancient Near East, as well as a meeting of the Cemetery Research Studies group, and gave several lectures, mostly on mortuary practices and social change. An intensive course on location on ‘Death in the Greek World’ was co-organized by her, Tamara Dijkstra and Eleni Panagiotopoulou.

An international network of scholars working on mortuary practices in the ancient world, the Necropoleis Research Network, was founded by Sofia Voutsaki, Lidewijde de Jong and Bilge Hürmüzlü with various activities being planned for the next years. Sofia Voutsaki and Lidewijde de Jong were also active in an international network of scholars working on modern Dutch urban cemeteries (both research and heritage related questions); two REMA students, Linda Smit and Annika Kropp, did related internships at the Gemeente Groningen.
Prehistory and Protohistory of Northwest Europe

Research focused on prehistoric socio-cultural dynamics and cultural landscapes was conducted from various perspectives. The analysis of ceramics from Swifterbant-S3 (Raemaekers) demonstrated that the incorporation of cereals in the early Neolithic broad spectrum food package correlates with a change in pottery characteristics: from Swifterbant to TRB. Arnoldussen re-assessed and re-interpreted excavation data from the northern Netherlands, and showed that traditional models of landscape use fail to capture the long-term dynamics of late prehistoric cultural landscapes. In the context of an international discussion about the improvement of computational modelling as a tool for archaeological theory building, Peeters evaluated a computational model of Mesolithic-Neolithic land use behaviour in Flevoland. Fieldwork (Bakker; Varwijk) in the terp-mound district provided evidence for middle Iron Age reclamation of peat lands for agricultural use near Leeuwarden, which is earlier than hitherto known. Unexpectedly, the dug-away terp Sotterum was shown to have grown largest in the late Middle Ages, when living on a terp was no longer necessary due to the built dikes. Research on maritime archaeology focused on inventory making of cultural heritage off shore in the Waddenzee region (Mulder), and a start was made to define and describe the maritime cultural landscape of Schokland (Van Popta). Çakırlar contributed to a DNA study which aims to map the genetic signature of cattle dispersal across Neolithic Europe. Results point at a single and regionally restricted domestication process in the Near East, and no significant subsequent maternal interbreeding with endogenous European wild.

Highlighted

This paper presents the results of stable carbon and nitrogen isotope analysis of bone collagen from fifty nine burials found at the Geometric cemetery at Agios Dimitriou, central Greece. The analysis gives us very important insights about dietary variation, social structure, age and gender differentiation in the Agios Dimitriou community. While isotopic analysis are by now used frequently for earlier periods of Aegean prehistory, this is the first time that the method is applied onto material from the Geometric period, a period that witnesses important social changes which eventually led to the formation of the ancient Greek city-states and ethne.
Excavation at terp Sotterum (photo F. de Vries, Toonbeeld).

**Highlighted**


On the basis of archaeological and especially historical sources, for decades a gradual expansion of early medieval ‘Frisia’ has been assumed: from its heartland (the present-day province of Friesland) to the coastal areas of the Netherlands and northern Germany. This study of 5th- to 7th-century valuables of gold and silver, found in graves, in hoards and at settlement sites within the assumed Frisian area, is presenting a different picture. Starting point is the assumption that valuables were exchanged as gifts between a leaders and members of their retinues, this way reflecting the size of elite networks and the kingdoms they represent. The collected data show the rise of small, regional kingdoms during the 5th and 6th centuries. In the late 6th and early decades of the 7th centuries, indeed the formation of more extensive kingdoms can be seen – in their largest extend, however, ‘only’ covering respectively the northern and the western Netherlands.
stock. Evidence for gene-flow suggests intercontinental trade connections between Neolithic farmers. In 2015 Sandra Beckerman defended her PhD on the use of ceramic analysis to reconstruct third millennium BC societies in the Netherlands, and Annet Nieuwhof defended her PhD on ritual practice in the terp region of the northern Netherlands, 600 BC – AD 300. Karen de Vries started her PhD project on norm and variation in the definition of (Roman) Iron Age social groups in the northern Netherlands, and Karla de Roest on a multi-angled study into individual and collective burial rites in NW Europe, 1000 BC – AD 500.

**Key publications**


3. GIA in society

Arctic and Antarctic Studies
In 2015, the Arctic Centre started its role in EU-PolarNet, and engaged in stake-holder mapping exercises as part of a wider initiative to design a new European Polar Research Strategy (see: http://www.eu-polarnet.eu/). Staff of the Arctic Centre maintained their contributions as expert advisors to the various Working Groups of the Arctic Council throughout 2015; these activities are supported by a long-running contract with the Ministry of Foreign Affairs. Staff also made active contributions to the ICARPIII process of the International Arctic Science Committee (IASC); this is identifying inter-disciplinary Arctic research priorities for the next decade, and communicating this message to scientists, policy-makers, stake-holders and the general public. The Arctic Centre also supports IASC’s Association of Polar Early Career Scientists (APECS), and fulfilled these obligations by hosting a workshop in Groningen in November 2015. To engage with the wider public the Arctic Centre’s staff, students and alumni also

Key publications / activities


Highlighted
The SEES.NL expedition, lead by Maarten Loonen, was the largest Dutch Polar expedition every undertaken. The research and outreach activities conducted by the expedition had extensive media coverage, and played an important role in reminding the Dutch government and also wider society about how fast the Arctic is changing as a result of global warming. The expedition itself also aimed for wide public engagement, and so included members of the general public, who supported the researchers in their scientific fieldwork, often in very remote locations, where the expedition guides kept a constant watch out for the approach of possible polar bears.

Classical and Mediterranean Archaeology
Much of the fieldwork carried out by the Classical and Mediterranean Archaeology chair group has an intrinsic valorisation component. For example, the archaeological interventions at Crustumerium safeguard the cultural heritage from looting by clandestine diggers. The chair group’s landscape archaeological projects also produce inventories of archaeology at the regional scale that can be used by archaeological heritage agencies in their protection strategies. During its field campaigns in the Pontine plain in Central Italy and in Calabria members of the chair group spend substantial time and energy informing the local community and wider public about their field activities through public lectures, leaflets and didactic activities at local schools. In 2015 a consortium consisting of GIA CMA staff, the Superintendency of Rome and the Glyptotek at Copenhagen cooperated to realize an international exhibition on Crustumerium to be opened in May 2016. This exhibition will also be hosted by the Allard Pierson Museum (Amsterdam,
2017) and finally at Rome, possibly in the Curia on the Forum Romanum. Within the framework of the Minor Centers Project an exhibition with accompanying booklet was prepared on GIAs fieldwork in the Pontine plain in Central Italy to be opened in the Museo Agro Pontino at Pontinia in 2016 titled “Dalle Pomptinae Paludes all’Ager Pomptinus. Archeologia e storia della pianura Pontina”. Outreach activities in this project are highlighted.

**Key publications / activities**


De Haas, T., Il ruolo dei centri minori nell’economia romana, Ricerche archeologiche nella regione pontina, Public lecture on the occasion of the 80th anniversary of the Comune di Pontinia (Italy) on the archaeology of the Pontine plain, 21-Mar-2015.


Gijs Tol and Tymon de Haas, 11-Sep-2015. Lecture for committee members of the funding bodies the Gratama Stichting and Board of the Groningen University Fund (GUF).


**Highlighted**

Researchers De Haas and Tol, in their study of Roman settlements and the rural landscape along the Via Appia south of Rome that goes by the name of ‘Fora, stationes and sanctuaries: the role of minor centres in the economy of Roman central Italy’ have developed a programme comprising various outreach initiatives, including information brochures, public lectures, guest teaching at schools and the preparation of a temporary exhibition with accompanying booklet to be opened in 2015. Also they gave public lectures for funding bodies (the Gratama Stichting and GUF Board), the general public in the Netherlands (Dante Alighieri Amsterdam) and in Italy (at the Museo Agro Pontino). Moreover they gave lectures at primary and secondary schools (in Borgo Faiti) and organised an interactive ceramic laboratory for schools at the Museo Agro Pontino.

Children excavating Roman artefacts in the laboratorio archeologico (under the supervision of Carmela Anastasia), organised as part of the Minor Centres Project’s public outreach program.
**Greek Archaeology**

With the capture of Palmyra by IS in May 2015, threatened Syrian heritage became world news. Lidewijde de Jong, who has extensive experience working in Syria and with archaeological remains from Palmyra, is currently developing various initiatives to increase public awareness of the archaeological heritage and its vulnerability in times of conflict. These focus on Roman Palmyra, but also on periods and sites that are less often mentioned in the news, such as the destruction of Muslim heritage in Iraq. She assisted izi.Travel, a company devoted to providing digital tools for cultural tourism, to develop a digital tour of the ancient site of Palmyra. The tour can be found via https://izi.travel/. Unifocus made a brief video about these activities and de Jong’s work (consult http://www.rug.nl/news-and-events/video/archive/unifocus/).

**Highlighted**

During the survey campaign at Ayios Vasilios a meeting was organised for the inhabitants of the neighbouring village of Xirokambi. The results of the excavations were presented by A. Vasilogamvrou, the director of the Ayios Vasilios Project, and the field survey project was introduced by Corien Wiersma with assistance (and translation) by Chryssa Vergidou. The meeting was reported in the local press and on internet. Sofia Voutsaki has been asked to contribute regularly to a local newspaper, and has already written an article for it. A group of school kids visited the site, were taught the essentials of archaeological survey, helped with the collection of surface finds, and received an amateur archaeologist’s diploma! These activities are part of a broader public outreach programme, which will be extended in the next few years with educational programmes for the local school and ethnographic interviews with the local inhabitants.
Prehistory and Protohistory of Northwest Europe

Archaeological research in the northern Netherlands started in Groningen with the establishment of the Biologisch-Archaeologisch Instituut in 1920. Ever since, the university has been an leading player in archaeological research and heritage management in the region. The chair group aims to maintain this tradition of regionally-embedded research and outreach, but expands its expertise at a national and international level.

The chair group continues to be an important partner in the field of heritage management. In 2015 several projects were undertaken in which staff members played a key role. One such project, commissioned by the National Heritage Agency, involves a synthetic analysis of excavation results from development driven work over the past 15 years. The aim is to define their scientific gain, and contribute to a new research agenda concerning early prehistoric archaeology.

Because a safe future for archaeological remains in situ cannot be taken for granted, we aim to create a stronger support base for the sustainable preservation of archaeological heritage by means of various activities. We work towards this goal by presenting our research to wider society via publications, lectures, public media (television, radio, newspapers), as well as involvement in ‘commercial’ projects, for instance as member of an advisory board.
Key publications / activities

Highlighted

An example of the GIAs participation in heritage management contexts is the involvement of staff and students in a rescue excavation near Dalfsen. Here, to everybody’s surprise, a complete cemetery – the biggest known yet – of the Funnel Beaker Culture and adjacent settlement appeared to be preserved on a sand ridge. Although indications for a rich archaeological record were apparent from trial trenches, nobody had foreseen the extent. Consequently, budgets appeared insufficient to excavate this extraordinary site, where burials from the Bronze Age and Merovingian times were also found. The situation led to fundamental discussion about the financing structure and responsibilities within Dutch archaeology. Care for the archaeological heritage had become the responsibility of the municipal authorities, whilst the ‘disturber’ faces the financing of archaeological research. However, in the case of exceptional finds, such as at Dalfsen, this can cause serious problems. The newspaper article written by Beckerman and Raemaekers is a plea for the re-instatement of a national rescue fund. As a side line, Raemaekers’ appearance on a late night show on Dutch national television to present the Dalfsen finds has led to expose a large laymen audience to the excitement of Dutch prehistory.
Narrative

Archaeologist builds early Medieval turf house

In 2015 Daniël Postma published a book titled “Het zodenhuis van Firdgum” (the turf house of Firdgum), in which he reports on a special building and research project addressing a broad audience. PhD student Postma built a large stable with roof-supporting walls of turves in the Frisian coastal zone, with the help of many organisations and volunteers. It is a good example of experimental archaeology with a great academic and societal value.

Making the past tangible for public and science

Although archaeologists are used to standing in the mud, they do not often create life-size reconstructions. What is the scientific and societal value of a building project such as this one? Postma explains: “As an archaeologist, you try to create an image of the way people lived in an area in a certain period, using the limited clues you have. You can study traces and combine data, but by imitating what past people did, you create a more complete and more reliable image. Each step involves a new decision: Where do you get your turves from, how do you judge their quality, what kind of bond is the strongest? By doing so, you discover all kinds of things about the techniques, the materials and the use of such a house. Turf buildings were the most important type of building in the terp area between the 5th and 7th centuries BC, but because we haven’t built in this way for centuries we lack a proper framework for interpreting their archaeological remains. What should you be looking for when you excavate a turf house? This reconstruction brings a lot of knowledge back into our research.

The same thing goes for the dialogue with the public. The turf house makes the past visible and tangible to everyone. It fires people’s imagination and arouses their interest. Most people do not have a clue that this type of houses used to stand in their local area. You can tell them, but now they can see for themselves.”

Cooperating with myriad organisations

The idea to build a turf house originated from the Yeb Hettinga Museum in Firdgum. Daniël Postma performed a preliminary investigation as a student. The project gradually expanded and more and more organisations became involved, each with their own contribution and expertise. It Fryske Gea provided turves, timber for the roof was arranged for by Staatsbosbeheer (the Dutch Forestry Commission).
and the Centrale As (regional roadworks project), and many locals volunteered for building of the house. Omrop Fryslân (regional television network) created a wonderful documentary featuring the project, and regional media and museums also contributed to the visibility of the turf house in the making. The project was financed by the Province of Fryslân, the municipality of Franekeradeel, the project ‘Terpen- en wierdenland: een verhaal in ontwikkeling’ (terp land: a developing story) and many other funds and organisations. In addition, the Province of Fryslân played an important advisory and organisational role behind the scenes.

Turf building: archaeologically unimportant or current example?

Up to now, there was not a lot of attention for this type of houses in the terp area. Archaeologists tend to look at the shabby 19th and 20th century peat labourers’ houses to form an idea of turf houses. The negative image that was developed as a result of this comparison, combined with a lack of information on the advantages of turf building, has led to the idea that turf houses were never more than a marginal architectonic phenomenon. However, if you look at the extensive excavations at Wijnaldum, where gold objects and costly jewellery were found, you find that archaeologists are struggling with
this idea. How is it possible that during the heyday of the Frisian-Groningen terp area, people mostly built turf houses? The turves must have had favourable characteristics, otherwise the rich and trading ‘Frisians’ would have turned to a more timber-oriented type of construction.

“It is remarkable that the early medieval building tradition from the northern Netherlands, links up perfectly with the current attention for sustainable building. Indeed, people worked with materials that were available locally and were used sensibly. For example, they didn’t saw up carefully managed straight trees to obtain a number of straight beams, but put to their advantage the natural curves of easily obtainable thinner roundwood to create a strong roof construction. For this reason, the building industry is interested in the project. I was invited to contribute to a workshop in Scotland, where architects finding inspiration from successful ancient building traditions. Students of the Eindhoven University of Technology (TU Eindhoven), who calculated the sustainability level of the turf house according to present-day criteria, came to the conclusion: Those medieval people were not so backwards at all, the turf house is a wonderful example of sustainability.”
Terpencentrum and community-mindedness

This PhD research is being carried out under the flag of the Terp Research Group at the Groningen Institute of Archaeology (GIA). The research group strives to enhance the quality, visibility and accessibility of the research of the terpen (settlement mounds), both for archaeologists and non-archaeologists. Postma: “But other people at the GIA are also actively participating in a discussion regarding the added societal value of archaeological research and the way we can bring it into the limelight. Archaeologists often deal with excavations that are being funded by the government, commercial organisations or even private individuals who wish to develop an area. Being the ‘disturbers’ of buried heritage, they bear the costs of a legally obliged archaeological investigation. It is of great importance to archaeologists to explain to the (tax) payer that this money is well spent. This means that you have to make sure the research is accessible and appealing to a great audience. In many cases, separate projects and publications are designed for a wider audience, but one could also make sure that scientific publications are more community-minded.

I have now chosen to use the book written for a general public as the basis for my PhD dissertation. Of course, additions are needed to be able to obtain my PhD, but the well-edited main text will remain the point of departure. I think that apart from the general audience, scientists appreciate a well-written and designed text as well!”