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Dakar, Senegal – 27, 28 and 29 November 2019
King Fahd Palace, Almadies

8th FGF Universities for land surveyors & ARN Workshop

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An african continent united for sustainable land governance and transformation

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Mot du Président de la
FGF

Fédération des
géomètres francophones
Marc Vanderschueren



Mot du Président de l'ONGES

Ordre national des géomètres
experts du Sénégal

Mamadou Ndir

Ladies and Gentlemen, Dear Guests,

The 8th edition of the FGF Universities in Dakar, organized for the first time with the African Regional Network – ARN – of the International Federation of Surveyors (FIG), will bring together French and English-speaking surveyors to address the issue of land governance throughout Africa.

In fact, for FGF members, the event is a return to Dakar. Indeed, ONGES has already hosted the FGF Universities in 2014 and the week spent together was memorable. Once again, my friends the President of ONGES, Mr. Mamadou Ndir and the Vice-President of the FGF, Mr. Samba Ndongo and their teams do us the honour of welcoming us. I would like to thank them very much for that.

This year's theme is perfectly in line with our Federation's motto: "*Let us be together the actors of the changes to which we aspire*".

The round tables, traditional communications and meetings of the collectives of women and young geometers promise to be rich and fruitful in terms of exchanges, sharing, teaching, recommendations, networking and friendships.

All this augurs an event, which will remain for a long time to come, engraved in the memory and heart of the participating "surveyor" community and of the entire assembly present.

To all of you, excellent Universities of Surveyors.

President of FGF

Ladies and Gentlemen, Dear Sisters and Brothers, Dear Guests,

As every year, the Fédération des géomètres Francophones organizes, in a member country, its Universities. This year, we have the honour and pleasure of hosting this august event during which participants will be asked to reflect on the theme: "*An African continent united for sustainable governance and transformation of territories*". The challenge of this question will undoubtedly be highlighted through the diversity of points of view, especially since the resources requested are transcontinental.

On this occasion, I would like to welcome our honourable guests who have sacrificed their precious time and resources to honour with their presence this prestigious "give and take" event in the capital of the Teranga region.

Allow me to thank in particular the President of the FGF, Marc Vanderschueren and his Board, the FIG-ARN, the women's collective and the networks of young French and English-speaking surveyors for the tremendous work that has been accomplished and the great mobilization for the success of these universities.

Our profession has a particularly dedicated workforce and exceptional human resources. And we dare to hope that the outcome of this event will strengthen us in the idea that we hold, in our hands, levers to contribute to the development of our respective countries.

Excellent Universities, to all of you.

President of ONGES

2ND YOUNG SURVEYORS AFRICAN MEETING (2YSAM)

Connecting the generations towards our common future



2YSAM – Day 1, Monday 25 November 2019

08:00-08:30 Registrations

08:30-09:30 **Opening session – Welcome by representatives**

ROOM C05/06 The FIG African Young Surveyors Meeting will be kicked off with welcoming addresses by representatives of each host organization. This is your opportunity to get to know the delegates and representatives.

- International Federation of Surveyors (FIG) and FIG African Regional Network (ARN);
- Fédération des géomètres francophones (FGF);
- Ordre national des géomètres-experts du Sénégal (ONGES);
- FIG Young Surveyors Network (YSN);
- Senegalese Young Surveyors Network.

09:30-10:30 **Keynote Session - Our Common Future**

ROOM C05/06 "Our Common Future" is the 1987 document by the World Commission on Development, targeted at multilateralism, as well as the interdependence of nations in search of a path towards sustainable development.

For Young Surveyors, "Our Common Future" is even more important to us. Drawing from the sustainable development perspective, as well as the link between young surveyors and more experienced surveyors in bringing experience together with innovation, our keynote speakers will present and discuss this theme.

10:30-11:00 Networking Break and group photo

11:00-12:30 **Session #2 – A Look into the Future of the Surveying Profession**

ROOM C05/06 In this fast paced world, the profession of the surveyor is constantly changing. In this session, we will hear inspirational presentations from young surveyors about their professional paths, as well as tips and tops how a young professional can grow their career.

12:30-13:30 Lunch break

13:30-15:00 **Session #3 – Wisdom Workshop**

ROOM C05/06 In this session young surveyors will have presentations from, and networking with, partners on the GLTN-FIG Volunteer Community Surveyor (VCS) programme, sharing stories from return volunteers and experienced humanitarian surveyors, as well as the importance of working within a community and understanding their culture.



15:00-15:30 Coffee/Tea break

15:30-17:00 **Session #4 – Tell us about it!!!!!!!**

ROOM C05/06 With the creation of several national Young Surveyors' organizations in Africa over the past year, and the strengthening of those that already exist, young surveyors across the continent will tell their stories, in order to inspire each other to become more involved in this African regional network.

2YSAM – Day 2, Tuesday 26 November

08:30-10:30 **Session #5: SDGs and Land Indicators**
ROOM C05/06 Every social problem has a land footprint. During this session, following the example of the FIG Task Force on SDGs and Land Indicators, we will discuss the different land issues in Africa. The session will conclude with a group activity for young surveyors to develop and adapt the SDG land indicators, with a particular focus on the specific land characteristics of the African continent.

10:30-11:00 Coffee/Tea break

11:00-12:00 **Session #6: Towards our future**
ROOM C05/06 The FIG Young Surveyors network has undergone some changes in its organization at the global and regional levels since the 1st African meeting. During this session, we will review the current organization of the FIG YSN network, discuss the work plan and gather ideas from the meeting presentations to reflect on how to further strengthen and integrate our network, at global, continental and national levels.

12:00-12:30 **Closing session**

12:30-13:30 Lunch break

13:30-17:00 Field Trip



FGF GENERAL ASSEMBLY

FGF General Assembly – Tuesday 26 November

15:30-16:30 <i>ROOM X</i>	FGF Executive Board Meeting <i>By invitation only</i>
16:30-18:00 <i>ROOM X</i>	General Assembly <i>By invitation only</i>
18:00-18:30 <i>ROOM X</i>	Joint meeting of the FGF & FIG ARN Boards <i>By invitation only</i>

8th FGF UNIVERSITIES & FIG-ARN ANNUAL WORKSHOP

UNIVERSITIES – Day 1, Wednesday 27 November 2019

08:00-09:30 Registrations – Exhibition stand installation

09:30-11:00 **Round-table #1 - Urban planning in Africa: which model for which strategy?**

ROOM BC12 Coordinator: Samba DIOUF (Senegal) – Moderator: Daniel ROBERGE (Canada)

Speakers: Shirley CHAPUNZA (Zimbabwe), Mandiaye NDIAYE (Senegal), Oluwafemi Muyideen OLAIYA (Nigeria)

11:00-11:30 Coffee break - Exhibition visits & networking

11:30-13:00 **2YSAM: Connecting the generations for common future**

ROOM BC12 Results and feedback of the 2nd Young Surveyors African Meeting

13:00-15:00 Lunch break, closing of registrations, exhibition visit, networking

15:00-16:30 **Round-table #2 - UN-GGIM Initiative: For an inventory of skills and needs in geodetic reference systems African countries**

ROOM BC12

Coordinator: Françoise DUQUENNE (France) – Moderator: Oumar H. KA (Senegal)

Speakers: Augustin BAMOUNI (Burkina Faso), Jojo MAZAMA SUKAMI (Democratic Republic of Congo), Michel KASSER (Switzerland), Diogoye DIOUF (Senegal), Bourahima KONE (Ivory Coast), Prisca ADANGNIDO (Benin)

16:30-17:00 Exhibition visit - Coffee break

17:00-18:30 **Session #1 – Challenges, challenges and prospects of land tenure security**

ROOM BC12

- Daniel ROBERGE (Quebec): *Land tenure security in Africa: Challenges, challenges and opportunities*
- Léopold DEGBEGNON (Benin): *Analysis of the spatial and temporal dynamics of land use and land issues in Ifangni commune (Benin)*
- Allé SINE (Senegal): *Land governance and territory in Africa: current situation, challenges and prospects*
- Exhibitors Demonstrations: SWAN - CHCNAV / STONEX - SFS TOPO

UNIVERSITIES – Day 2 – Thursday 28 November 2019

08:30-10:00 Annual Workshop – FIG African Regional Network (ARN)

ROOM BC12

10:00-11:30

Official Ceremony:

**GRAND
AMPHITHEATRE**

- Presentation of the programme of the ceremony
- Address by the President of the National Order of Surveyors of Senegal, Mr. Mamadou NDIR
- Address by the Chairwoman of the FIG African Regional Network, Ms Jennifer WHITTAL
- Address by the President of the Fédération des géomètres francophones, Mr. Marc VANDERSCHUEREN

Official speech by Mr Mahammed Boun Abdallah DIONNE, Minister of State, Secretary General of the Presidency of the Republic

11:30-12:30

Official photos, Exhibition visit and Coffee break

11:30-12:30

Session #2 – Sustainable land management for the control of environmental risks and the preservation of natural resources (Part 1)

ROOM BC12

- Godwill Tamunobiekiri PEPPLÉ (Nigeria): *Estimating Carbon Sequestered by Land Use Land Cover Types in Lagos and Environs (Nigeria)*
- Bertrand HAZOUME (Benin): *Expropriation for public utility in Avlekete (Benin): Environmental impact and land issues*
- Bouna KOITA (Senegal): *Project to create and enhance a natural community space around the crocodile pond of Dialambere (Senegal)*

12:30-14:00

Lunch break, exhibition visit, networking

14:00-15:30

Round-table #3 - Towards integrated land and water management to mitigate the effects of climate change and promote sustainable agricultural and urban development

ROOM BC12

Coordinator: Aly TOUNKARA (Senegal) – Moderator: Jean-François DALBIN (France)

Speakers: Godwill Tamunobiekiri PEPPLÉ (Nigeria), Bouna KOITA (Senegal), Lily Lisa YEVUGAH (Ghana), Jennifer WHITTAL (South Africa)

14:00-15:30

Meeting of the Collectif Femmes géomètres francophones

ROOM C05/06

15:30-16:00

Coffee break

16:00-17:30

Session #3 – Geospatial information for land use planning (Part 1)

ROOM BC12

- Shirley CHAPUNZA (Zimbabwe): *Can we retrospectively and efficiently evaluate planning decisions? Geo-spatial technologies for planning performance evaluation*
- Michel KASSER (Switzerland): *Feedback on changes in official reference systems*
- Paul CHAMBON (France): *Teria, a turnkey GNSS network solution to address land governance issues, including land registry and agricultural policy management*
- Kamal BEN ADDOU IDRISSE (Morocco): *Capturing reality, Big Data & Machine Learning - Case of municipal taxation*
- Exhibitors Demonstrations: SAREDICA – LEICA / DELTADRONE / GEOTECHNOLOGIES AFRIQUE - TRIMBLE

16:00-18:00
ROOM C05/06

Session #4 – Role and responsibilities of the surveyor in dealing with major global land issues and technological innovations

- Francis ROY (Canada): *Role and responsibilities of the surveyor: the challenge of training a versatile expert who is open to the world*
- Stanis NGOMBE LUMPUNGU (Dem. Rep. of Congo): *The socialization of the surveyor's profession as a unifying and planning factor*
- Salim BENMLIH (Morocco): *Lasergrammetry for the digitization of heritage: the case of the city of Fez (Morocco)*
- Myjosé MIMBULA MBUTA (Dem. Rep. of Congo): *The profession of surveyor, a factor of peace and development for a united Africa*
- Alassane BA (Senegal): *Innovation in geospatial technologies and involvement in the role and working methods of surveyors*
- Khalid YOUSFI (Morocco): *Reform actions to promote the profession of surveyor engineer in Morocco*
- Stanislas BALEGA ZAMUZIKO (Dem. Rep. of Congo): *Reform of land legislation in Dem. Rep. Congo, a response for good land governance*

19:00

Official Dinner

UNIVERSITIES – Day 3 – Friday 29 November 2019

09:00-10:30
ROOM BC12

Round-table #4 The modernization of cadastral systems for better governance of territories

Coordinator: Chrystine MALTAIS (Canada) – Moderator: Jean-François DALBIN (France)

Speakers: Bertrand HAZOUME (Benin), Kwabena OBENG ASIAMA (Ghana – Germany), Francis ROY (Canada), Adama SARR (Senegal)

09:00-10:30
ROOM C05/06

Session #5 – Sustainable land management for the control of environmental risks and the preservation of natural resources (Part 2)

- Aly TOUNKARA (Senegal): *Baobolong Watershed Management: A Strategy to Strengthen the Resilience of the "Saloum" Ecosystems (Senegal)*
- Lily Lisa YEVUGAH (Ghana): *Spatial distribution and potential impact of mercury in surface soils across Ghana*
- Madiodio NIASS (Senegal): *Large-scale agricultural investments in Africa: Preventing risks and seizing opportunities to promote food security and sustainable and inclusive development*
- Jennifer WHITTAL (South Africa): *The challenges of surveying legal coastal boundaries and lines*

10:30-11:00

Coffee break

11:00-12:00

Restitution of the work of the round tables, sessions and collectives

ROOM BC12

12:00-13:00

Closing Ceremony

ROOM BC12

13:00-14:00

Lunch

14:00

Dismantling of exhibitors' stands

Departure of the shuttle buses for the Technical visit & Sightseeing tour (*on reservation only*):

Technical visit - Diamniadio Pole

or

Sightseeing tour - Bandia Animal Reserve + Somone Lagoon

Round - Tables

Round-tables: A new way of thinking and understanding the responsibilities and role of the surveyor



A new concept, a new way of federating and mobilizing skills, knowledge and expertise and an appropriate way of setting up, on the basis of a concerted approach, tools and mechanisms conducive to innovation, the idea of round-tables is, for land surveyors, a new way of deepening and thinking about the responsibilities and role of the profession.

Designed in a spirit of creativity, active and active complementarity, the round-tables are intended as a space for concrete exchange. A space where public actors, researchers and academics, experts and practitioners intend to raise the level of debate to advance the profession by consolidating the knowledge and skills of participants.

For our 2019 universities, four (4) round-tables are available:

Round-table #1	Urban planning in Africa: which model for which strategy?
Round-table #2	UN-GGIM Initiative: For an inventory of skills and needs in geodetic reference systems in African countries
Round-table #3	Towards integrated land and water management to mitigate the effects of climate change and promote sustainable agricultural and urban development
Round-table #4	The modernization of cadastral systems for better governance of territories

The choice of themes is part of our deliberate desire to encourage the community of surveyors to grasp the land dimension of the major economic, political, social and environmental issues of the early 21st century that are challenging and disrupting the lifestyles and organization of human populations.

Expectations of decision-makers, scientific and academic actors as well as land professionals are obviously quite high. Also, each round-table will be an opportunity to communicate and share experiences, tools, national good practices and international recommendations in each of these areas.

Each round-table will provide participants with the opportunity to reflect on shared observations, which are necessary prerequisites for defining guidelines for any action to be taken locally or regionally.

The debates and discussions that will be held will make it possible to implement a series of guidelines on the various themes addressed that could irrigate land governance in Africa, and elsewhere, at the legislative, technical and institutional levels.

In short, the round-tables must allow:

- To ensure a space for exchange and advice for the various stakeholders in the land sector;
- To achieve a coherent understanding of the paradigms of each of the themes addressed;
- To promote good land tenure practices, through a comparative approach of initiatives, practices, national experiences and international recommendations;
- To support public policies in controlling land management resources;
- To develop professional skills and abilities through a process of dialogue and exchange of experiences, supported and sustainable.

Round-table #1

Urban planning in Africa: which model for which strategy?

Rationale

Compared to the age of civilizations on this continent, planning in Africa is relatively recent. Initially conducted at the national level, it dates back to the early years of African countries' independence. This planning was necessary for the organisation of structural changes in the territories, in particular the effects of population growth, the urban explosion, social needs, etc. Decision-makers have thus needed insights for infrastructure, investment, health, education and land use planning.

The early stages of planning in Africa have gone through several phases, in search of an optimal development model. Despite various attempts, and while several areas remain to be improved, this development planning seems to be on track.



African planning on track?

Today, a new form of planning is being initiated in Africa: planning is no longer national but local, making it possible to address new challenges that are more focused than the national economy or education. African cities are increasingly equipped with urban planning and planning documents at the city level: urban master plan, and even POS and Agenda 21. At a time when African cities are attracting and seeing their populations explode, urban challenges are complex and must be addressed on a scale adapted to the territory and its population: urban mobility, waste and sanitation management, occupation of public spaces, etc.



However, there is once again a great risk of reproducing the mistakes of the past, and of easily transposing methods that have consisted in trying to apply methods tested elsewhere but often without taking into account African problems. Informal economy, the importance of religion in land management, etc. The problems, approaches, challenges, priorities differ between African cities and cities in other regions of the world, but also between different cities in African countries.

Round-table #1

Urban planning in Africa: which model for which strategy?

Coordinator: Samba DIOUF (Senegal)

Samba Diouf holds a PhD in urban planning and development from the University of Toulouse (France). Since 1981, he has successively held several positions of responsibility within the Department of Urban Planning and Architecture. Mr. Diouf is also a professor in the Department of Geography at Cheikh Anta Diop University in Dakar. He regularly represents Senegal at major international urban planning conferences and acts as an expert and consultant for UN-Habitat on urban planning projects in Senegal and elsewhere in Africa. Finally, Samba Diouf is the author of numerous studies on urban planning regulations, restructuring and land regularization.

Moderator: Daniel ROBERGE (Canada)

Daniel Roberge is a consultant in land management and public administration. He has acquired solid experience in land governance (reforms, infrastructure and RIS) in international organizations, the private sector and non-governmental organizations. From 2011 to 2014, Daniel Roberge chaired Commission 7 (Cadastre and Land Management) of the International Federation of Surveyors (FIG). From 2013 to 2016, he worked at the World Bank as a land management specialist in Europe, Africa and the Middle East, before joining the Ministry of Municipal Affairs and Land Use, Quebec, Canada until 2016. Since 2017, Daniel Roberge has been a consultant on land cooperation projects in Madagascar, Haiti, Togo, Côte d'Ivoire and Morocco.

Speakers:

Shirley CHAPUNZA (Zimbabwe)

Shirley Chapunza has a BSc. Honours degree in Surveying and Geomatics with extensive background in Geodesy. Her experience in cadastral and engineering surveying motivated her choice of career in academia. Currently she is focusing on enhancing her academic career while working as a Teaching Assistant. She is a member of the Zimbabwe Institute of Geomatics as well as chairwoman of the Zimbabwe Institute of Geomatics Youth Network. Shirley has a passion for GIS and its extensive application in urban planning and management.

Oluwafemi Muyideen OLAIYA (Nigeria)

Oluwafemi Muyideen OLAIYA obtained his first degree in geodesy and geocomputer science in 2015 at the Federal University of Technology in Minna. He is an associate member of the Nigerian Institution of Surveyors. He is the author of a thesis entitled "Concept of the GIS and the three-dimensional survey on the state of infrastructure construction". He was an ambassador for the Lagos Construction Trade Fair "The Big 5 Construct Nigeria" as a technical speaker and resource person. He is currently working as a surveyor/supervisor engineer on the construction of the Zungeru hydroelectric power plant project.

Directorate General of Urban Planning and Architecture (Senegal)

Roundtable #2

UN-GGIM Initiative: For an inventory of skills and needs in geodetic reference systems in African countries

Rationale

In 2011, the United Nations launched the GGIM initiative to review and coordinate global geospatial information management (<http://ggim.un.org>) to promote sustainable development, economic growth, poverty alleviation, peace and security, disaster risk reduction and adaptation to climate change.

The UN-GGIM Geodesy Subcommittee is working to develop an accurate and sustainable Global Geodetic Reference Frame (GGRF).

The Subcommittee on Education, Training and Skills Building is responsible for assisting UN Member States to develop their skills and expertise for the global development of the GGRF. To this end, it has developed a questionnaire for which few African countries have responded, in particular French-speaking countries.

The purpose of this round table is to present the UN approach, some examples of the state of resources and needs, as well as existing solutions in geodesy in African countries, and to encourage as many people as possible to share the available information, in particular through the GGIM questionnaire.



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Roundtable #2

UN-GGIM Initiative: For an inventory of skills and needs in geodetic reference systems in African countries

Coordinator: Françoise DUQUENNE (France)

Françoise Duquenne has been president of the Association francophone de Topographie (AFT) since 2012. Graduated from the National School of Geographical Sciences in 1976, her career was devoted to geodesy mainly at the National Geographical Institute (IGN) and ended in 2009 as head of the Geodesy and Levelling Department. She also devoted herself to teaching and research, particularly in GNSS, in various French engineering schools and universities.

Moderator: Oumar H. KA (Senegal)

Oumar H. Ka is Director of Geographic and Cartographic Works (DTGC) at the National Agency for Spatial Planning (ANAT) of Senegal and President of UN-GGIM: Africa.

Speakers:

Augustin BAMOUNI (Burkina Faso)

Augustin Bamouni is a Licensed Surveyor. He is Director General of the GEOIDE cabinet and Secretary General of the Ordre des Géomètres-Experts du Burkina Faso. A member of the Association Française de Topographie (AFT), he is also the main administrator of Burkina Faso's first private GNSS network, GeoNet+. Since 2017, at the request of the Institut Géographique du Burkina, he has been a member of the United Nations International Committee of Experts for UN-GGIM / Commission Education, Training and Capacity Building (ETCB) on behalf of Burkina Faso.

Michel KASSER (Switzerland)

Michel Kasser, Geographic Engineer and University Professor, was Director of the ESGT (1991-1999) and the ENSG (2003-2011) in France, then Professor of Geodesy in Switzerland, responsible for the Geomatics sector at HEIG-VD until 2018. From 1999 to 2003, as head of geodesy at the IGN, he accompanied the evolution of France's official reference system. Honorary President of the French Association of Topography, he is currently President of the Surveyors of Western Switzerland.

Diogoye DIOUF (Senegal)

Diogoye DIOUF, Surveyor and Topographer, is a lecturer and researcher at the Engineering Sciences Training and Research Unit (UFR-SI) of the University of Thiés in Senegal. Since 2018, he has been doing a doctorate in Geodesy. His research work, carried out at the Mechanics and Modelling (UFR-SI) and GeF (ESGT / France) laboratories, focuses on the use of emerging GNSS positioning methods and tools in the redefinition of geodetic repositories.

Bourahima KONE (Ivory Coast)

Prisca ADANGNIDO (Benin)

Jojo MAZAMA SUKAMI (Democratic Republic of Congo)

Round-table #3

Towards integrated land and water management to mitigate the effects of climate change and promote sustainable agricultural and urban development

Rationale

Water and climate change are regularly cited as one of the most serious crises that humanity will face in the coming decades. In fact, the links between the two issues are so close that perhaps they should be seen as one and the same issue.

Indeed, the impacts of climate change will mainly be felt (by humans) through water: droughts, floods, sea-level rise and coastal erosion.

However, the land issue is at the heart of the approach to protecting water resources. Many initiatives carried out throughout the last ten years or so bear witness to this. They underline the collective dimension of the preservation of the resource throughout the water cycle, but also the multiplicity of related challenges, due to competition between uses (urban development projects, preservation of agricultural production potential, etc.).

However, climate change, through increased risks of maritime and river flooding and prolonged periods of drought, complicates this management task, which is moving public action towards a new "governance" of all natural resources.

Land management, an effective tool for water protection?

In rural areas, new challenges related to controlling water use and reducing pollution sources are interfering with the agricultural land market. In urban areas, water management has long focused on the quantitative aspect only, whether it is the supply of potable water or the disposal of runoff and wastewater.

In recent decades, we have seen the development of "integrated management" approaches to land and water, in both urban and rural areas.

These approaches all have the same objective: quantitative and qualitative water management through land management.

There are many applications:

- improvement of the urban landscape and living environment by proposing developments that offer multiple benefits;
- acquisition by local authorities of plots of land within catchment feeding areas in order to impose land uses that preserve their agricultural vocation but are in conformity with the preservation of water quality
- preservation of water resources by considering rainwater as a resource and no longer as a nuisance;



- protection of the receiving environment and in particular the treatment of waste water and industrial water;
- maintaining the hydraulic regime of the receiving environment as close as possible to the natural regime;
- protection and restoration of water quality from surface runoff and underground networks;
- consideration of surface and groundwater, as well as flooding and the impact on river erosion.

However, land management of agricultural and urban areas is part of a necessary articulation of decision-making scales, from national to local, and everywhere decentralization is being implemented, giving local authorities powers in urban planning or territorial development. At their side, multiple actors, private (professionals, associations, civil society) and public are also stakeholders to associate the use and preservation of natural resources with land governance.



At the territorial level, it is therefore based on coordination processes between actors of various statuses, and refers to games of negotiation, compromise and various alliances, formalized or informal.

If the idea of generalizing the urgency of water conservation is now widely spread, how does it change the lines of land governance and land use planning or at least re-examine them? Unorthodox measures are needed. How are we now moving towards new forms of governance, or even innovations in this area?

Round-table #3

Towards integrated land and water management to mitigate the effects of climate change and promote sustainable agricultural and urban development

Coordinator: Aly TOUNKARA (Senegal)

Aly Tounkara is a surveyor-topographer engineer, a Polytechnician in Civil Engineering, and a specialist in the mobilization and management of water resources. Project Manager at the Office des Lacs et Cours d'eau du Sénégal (OLAC) at the Ministry of Water and Sanitation of Senegal (MEA), Aly Toukara is also Honorary President of the National Network of Young Surveyors of Senegal affiliated to the Ordre National des Géomètres Experts du Sénégal (ONGES).

Moderator: Jean-François DALBIN (France)

After studying at the Institute of Topometry, Jean-François Dalbin has been working as a licensed surveyor in the Paris region since 1987. From 2001, he was involved in the bodies of the Order of Licensed Surveyors at regional and then national levels and became President of the National Board of Licensed Surveyors from 2015 to 2019. Jean-François Dalbin has been involved for many years in the profession's international cooperation activities, particularly in land tenure security or the organization of the profession in the countries of the South. He is also a trainer in co-ownership and volumes for surveyors. Since 2018, Jean-François Dalbin has also been Treasurer of the Fédération des géomètres francophones.

Speakers:

Godwill Tamunobiekiri PEPPLÉ (Nigeria)

Godwill Tamunobiekiri Pepple is a Surveyor and Environmental Analyst practising in Lagos district and registered by the Surveyors Council of Nigeria (SURCON). He holds an MSc. in Environmental Mapping from the department Civil, Environmental and Geo-matics Engineering (CEGE), University College London (UCL) as well as a bachelor degree in Surveying and Geo-informatics degree from University of Lagos, Nigeria.

Bouna KOITA (Senegal)

Bouna Koita is mayor of Dialambéré, a commune of 15,000 inhabitants located in the district of Mampatim, in the department of Kolda in southern Senegal. For a long time remained anonymous like the vast majority of local authorities in the interior of Senegal, the commune of Dialambéré is now recognized thanks to two radically opposed things: the illegal and fraudulent exploitation of its Kandiator forest massif and its famous crocodile pond, which is increasingly threatened. These two environmental issues continue to generate debate and, above all, action by local authorities to stop the degradation of this threatened biodiversity.

Lily Lisa YEGUVAH (Ghana)

Lily Lisa Yevugah is a geomatic engineer and a principal technician at the Department of Geomatic Engineering in Kwame Nkrumah University of Science and Technology (KNUST), Kumasi Ghana. She is a member of Ghana Institution of Surveyors (GhIS) and an executive member of Young Surveyors' Network (Ghana). She is currently a PhD student (from 2017 to date) on the SHEATHE Project run by KNUST and Aarhus University in Denmark. She is working on Spatial mapping and modelling of heavy metals in Ghana.

Jennifer WHITTAL (South Africa)

Jennifer Whittal is an Associate Professor in the Geomatics Division at the University of Cape Town. She obtained a B.Sc. (Surveying) and a M.Sc. (Engineering) specializing in global positioning systems from the University of Cape Town. In 2008, Jenny obtained her Ph.D from the University of Calgary applying critical realism, systems theory and mixed methods to a case of fiscal cadastral systems reform. She is a Professional Land Surveyor and lectures advanced surveying and land law. Research interests are land tenure and cadastral systems with specific interest in sustainable development and resilience in land holding for the poor, the continuum of land rights and measures of tenure, historical property holding, and cadastral issues in the coastal zone. Since 2018, Jennifer Whittal chairs the African Regional Network of the International Federation of Surveyors (ARN-FIG).

Roundtable #4

The modernization of cadastral systems for better governance of territories

Rationale

The cadastre has long been associated exclusively with real estate taxation and land title registration. This somewhat austere vision of the land registry no longer reflects its current situation.

Over the past twenty years, the cadastre has undergone a major conceptual and methodological modernization. With the development of geomatics, cadastres have become real information infrastructures for territorial governance. Indeed, cadastral information is now used for such diverse purposes as development planning, land use control, natural risk prevention and sustainable development.

In the last decade, many States have launched programmes to build and reform cadastral systems to address issues of economic development, poverty reduction and decentralization of government powers. It has thus become a tool that invites reflection on the political issues of geography.

The conceptual modernization of the cadastre

The versatile use of the cadastre is not automatic because of its computerization implemented over the past thirty years. Its integration into institutions responsible for territorial governance poses several political, legal, organizational, social and technical challenges. This is a question about the control of geographic information, its use, confidentiality, accessibility, etc. Cadastral problems are no longer only technical; they rather reflect the difficulties inherent in the territorial organization that a society wants to establish on the territory it occupies.

The use of this methodological approach remains a recent phenomenon since, historically, the cadastre has been treated and analysed as a technical tool only, its other dimensions having been obscured.

There is currently an international context favourable to land reforms due to the globalization of trade and the desire to combat poverty through the regularization of informal land tenure. These reforms provide an opportunity to build strong, reliable and sustainable institutions that promote access to land, unequivocal land use, secure transfer of rights, mortgage credit and rational land use.

The land registry is almost always at the centre of these land reforms because it provides regional and local institutions with the necessary information support to strengthen their territorial governance capacities.

By sharing national experiences, completed or in the process of being implemented, this round table offers you a better understanding of the real possibilities offered by cadastral systems in the face of land management and planning reforms.



Roundtable #4

The modernization of cadastral systems for better governance of territories

Coordinator: Chrystine MALTAIS (Canada)

Land surveyor, in charge of major projects, with an MBA, Chrystine Maltais has experience in cadastre and land rights, education and strategic development. A member of the Ordre des arpenteurs-géomètres du Québec, she has worked at Ecce Terra for 24 years and is now Director of International Business Development for the company. Chrystine Maltais was a key player in the Quebec Cadastre Reform Program. Supported by this unique experience and expertise, Ms Maltais has offered university training, institutional consulting services and conferences in several countries.

Moderator: Jean-François DALBIN (France)

See Round-table 3.

Speakers:

Bertrand HAZOUME (Benin)

Kwabena OBENG ASIAMA (Ghana – Germany)

Kwabena Asiamah is a research scientist at the Geodetic Institute of the Leibniz University of Hannover, Germany. He holds an MSc. and a PhD in Land Administration from the University of Twente, the Netherlands. In 2018, he received the FIG-Survey Review Prize at the XXVI FIG Congress. Kwabena's research interests span real estate valuation, land governance, as well as innovative approaches to land administration and land management activities on customary lands of the Global South. He is currently the Vice Chair of the FIG Young Surveyors Network.

Francis ROY (Canada)

Francis Roy is professor in the Department of Geomatics at Laval University (Quebec, Canada), where he has been the Chair since 2016. His teaching focuses on cadastre, land law, land administration, land use planning and urban planning. He is a regular researcher at the Centre de recherche en données et intelligence géospatiales (CRDIG). He has also been a member of the Ordre des arpenteurs-géomètres du Québec since 1991, where he sits on various committees related to the development of the profession.

Adama SARR (Senegal)

Adama Sarr, Surveyor Engineer, is Head of Cadastral Services at the Regional Office of Taxes and Domains in Tambacounda, within the General Directorate of Taxes and Domains (DGID) of the Ministry of Economy, Finance and Planning (MEFP) of Senegal. He is a member of the Senegalese Young Surveyors' Network, created in 2013 by the Ordre national des géomètres-experts du Sénégal (ONGES). Since December 2018, Adama Sarr has also been the coordinator of the FIG's Francophone Young Surveyors' Network.

Technical Visit



Sightseeing Tour

On reservation only

TECHNICAL VISIT - Diamniadio Pole, the new city that wants to give Dakar a new lease of life

A major urban development project looking to the future, illustrating all the issues of sustainable development of territories and drawing on all the skills and fields of expertise of surveyors.

The Diamniadio cluster consists of the municipalities of Diamniadio, Bargny, Sendou and Sébikotane. The authorities' stated objective is to relieve congestion in the city of Dakar and its 3 million inhabitants. Built on 2000 hectares, it is located thirty kilometres from the capital and should eventually house 350,000 inhabitants.



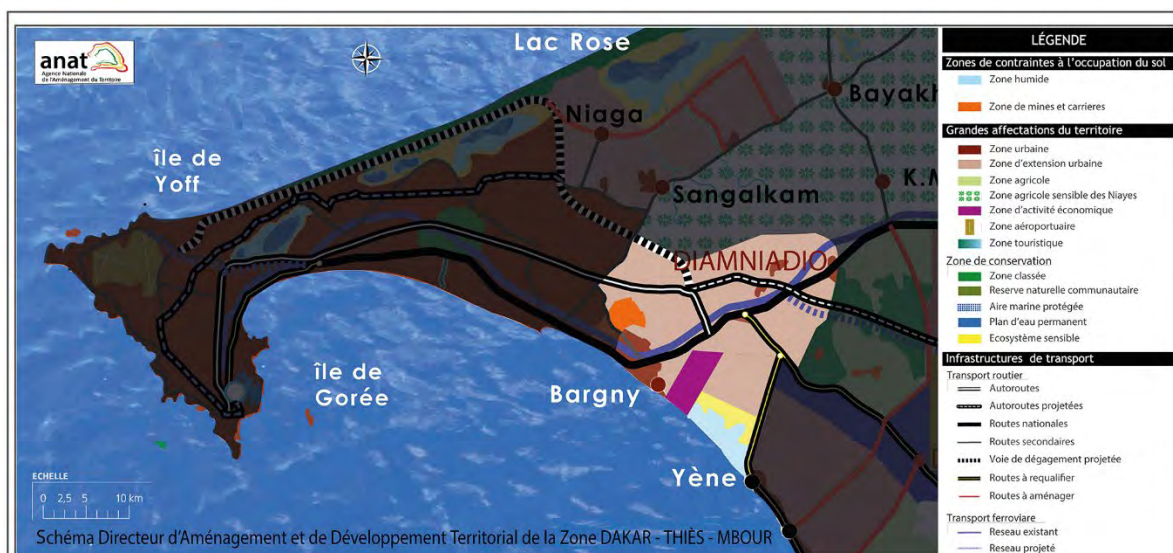
It is a crossroads territory, a transition zone between the Dakar agglomeration and the rest of the country. It is bounded to the west by the Dakar urban area, to the north by the Niayes pole, to the east by the Diass pole and to the south by the Atlantic Ocean.

The Diamniadio cluster is structured around the "Diamniadio urban cluster" project, the Bargny mineral port and the planned industrial development projects. With the structuring projects planned in this area (toll motorway, electrified rail track of the Regional Express Train) and the existence of urbanizable areas, this centre will probably experience rapid demographic and economic growth.

To prevent Diamniadio from being nothing more than a juxtaposition of services installed in districts cut off from each other, the designers planned to distribute more than 40,000 housing units with different stands to cement the city's districts according to a concept of social and functional mix.

However, this area is currently marked by the presence of unplanned or traditional districts in some municipalities, a dispersed industrial fabric, mixed with housing and the presence of former quarries not restored. It is also characterized by the low level of equipment and exposure to coastal erosion, which is a permanent threat to certain infrastructures and dwellings.

Source: National Agency for Spatial Planning



SIGHTSEEING TOUR - Bandia Animal Reserve (Sindia, 65 km from Dakar)

The Bandia Private Reserve, with its 3,500 ha, is a small jewel of ecological success through the surprising regeneration of its flora and the reintroduction of large African mammals, sometimes extinct for centuries, under demographic pressure and poaching.

In addition to animals and nature, visitors can also discover serere pyramids with reconstructed mortuary chambers, griot tombs in the hollow of a thousand-year-old baobab containing authentic human bones, coal millstone, Fulani huts, etc., all accompanied by explanations and anecdotes from competent and multilingual guides.

<http://www.reservedebandia.com/>



Between land and sea, the Somone lagoon (Petite-Côte, 77 km from Dakar)

On the Petite-Côte, La Somone, named after a small local river, invites you to relax. The Somone River originates in the Ndiass massif, near Thiès, and flows down towards the Atlantic Ocean. Its mouth, separated by a sandy tongue, forms a nature reserve.

Since 1999, the Somone lagoon has been a protected area of 700 hectares and is a small paradise for bird lovers. Indeed, the lagoon is home to 172 species. The sandbanks and roots of mangroves at low tide are the favourite places for many birds to feed.

Aboard a pirogue, you can easily observe mocking gulls, pelicans, grey herons, egrets, terns, ospreys, red-billed hornbill, curlews, bassan crazies, cormorants, etc. Regularly, a group flight of birds breaks the peace. As for fauna, you can also meet jackals or Nile monitors.

Flora coast, the mangrove swamp borders the lagoon with mangrove forests. This extremely rich but very fragile ecosystem develops at the junction of the fresh water of rivers and the salt water of the Ocean. Mangroves are essential for fish reproduction. Regularly, the local population - especially women - reforests mangroves and cleans the lagoon of plastic waste brought by the sea, with success.



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