



Gilbert KABANDA
proclaimed Doctor of
Medicine at UNIKIN

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2024

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the construction of the RSNC building

RSNC organizes Science Days to
promote science and technology



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Fertile ground for scientific research in 2025

At the start of a new year, when every bud in fertile soil promises a new blossom, we hope that 2025 will bring new perspectives and opportunities for our dear readers. We wish them a year rich in discovery and fulfillment. On behalf of the National Scientific Council (NSC), we wish them all the best.

We would especially like to wish His Excellency the President of the Republic, Head of State, HEM Félix-Antoine TSHISEKEDI TSHI-LOMBO a year full of health, happiness and success in his high office, so that his determination and vision continue to guide our country towards a better future. It is also an opportunity to present to their Excellencies the Presidents of the National Assembly and the Senate our most sincere wishes for the New Year.

We wish the Prime Minister, Mrs. Judith SUMINWA, and the entire government every success in their term of office, and the completion of all their projects for the well-being of our people. May 2025 be a year of peace and stability, rich in ambitious projects and concrete achievements for the well-being of our nation. In particular, we are convinced that the efforts of the Minister of Scientific Research and Technological Innovation, Dr. KABANDA KURHENGA, to promote scientific research and innovation, will help to meet the challenges facing our nation.

The year 2025 promises to be a pivotal one for scientific research in the Democratic Republic of Congo. Our country, rich in human potential and natural resources, needs the innovation and creativity of its researchers more than ever to meet the challenges it faces.

The past year was marked by several notable achievements, including the DRC's participation in the United Nations high-level meeting on the elimination of nuclear weapons, the ongoing training of our researchers, and the presentation of innovative projects at the Forum du Génie Scientifique Congolais. These projects, such as the robot communicator, the installation of a micro-electrical

power station, green coal with shared value, the school plane, the neonatal incubator, the assembly and modification of Mercedes vehicles, the Kasai monitor, the intelligent dustbin, etc., bear witness to the vitality of our scientific community and its commitment to putting science at the service of our country's development.

PHowever, we are aware that many challenges remain. Scientific research in the DRC faces major constraints in terms of funding, infrastructure and access to international publications.

That's why, in this new year, NSC wishes to reaffirm its commitment to supporting scientific research in the DRC. We will work tirelessly to :

- Improving research funding: we will continue to advocate increased research budgets, both nationally and internationally.
- Strengthening national and international collaborations: we will encourage collaborations between Congolese and foreign researchers, as well as between our country's various research establishments.
- Developing research infrastructures: we will work to improve research equipment and laboratories, to enable researchers to work in optimal conditions.
- Promoting scientific culture: we will continue to raise public awareness of the importance of science and encourage young people to take up scientific careers.

Without doubt, like fertile soil, scientific research and technological innovation is an environment where ideas can be sown, cultivated and harvested.

It's a place where players are encouraged to take risks, explore new avenues and question what they've already learned, in the pursuit of excellence. Dear researchers, we invite you to continue your efforts with the same passion and determination. You are the future of our



Professor Pius Mpiana Tshimankinda
NSC President,

country. Your research work is essential if we are to meet the challenges we face in areas such as health, agriculture, energy and environmental protection.

Don't be afraid to be ambitious in your research projects. NSC will always be there to support you. In the year 2025, let's make scientific research a national priority. Together, let's build a strong, prosperous and innovative Congo.

Prof. Pius MPIANA TSHIMANKINDA
President of the National Scientific Council



Activities of the President of the Republic

President Félix-Antoine TSHISEKEDI attends the World Economic Forum in Davos

The President of the Democratic Republic of Congo (DRC), Félix-Antoine TSHISEKEDI, will take part in the 55th World Economic Forum in Davos, Switzerland, from January 20 to 24, 2025. This annual gathering brings together political leaders, business leaders, academics and non-governmental organizations from all corners of the globe to discuss major global and regional challenges.

These include responding to geopolitical shocks, stimulating economic growth to improve people's living standards, and managing a fair and inclusive energy transition.

This year's World Economic Forum in Davos will take place from January 20 to 24, 2025, under the theme "Collaborating in the Age of Intelligence". This theme underlines the crucial importance of global cooperation at a time when technological advances such as Artificial Intelligence, quantum computing and biotechnology are rapidly transforming societies.

The program of the World Economic Forum 2025 will be oriented around five highly interconnected thematic priorities, namely rebuilding trust, reimagining growth, investing in people, safeguarding the planet and developing industries in the age of intelligence.



President Félix-Antoine TSHISEKEDI will use the occasion to announce the launch of a vast project to combat climate change and preserve biodiversity in the Democratic Republic of Congo.

Four sectoral Ministers are accompanying the Head of State to this annual meeting. They are Minister of State for Foreign Affairs Thérèse KAYIKWAMBA WAGNER, Minister of State for the

Environment Eve BAZAIBA, Minister of Finance Doudou FWAMBA and Minister of Mines KIZITO PAKABOMBA.

Communication Unit/Presidency of the DRC



Félix-Antoine TSHISEKEDI presides over the ceremony to hand over medical equipment for the fight against MPOX

On January 18, 2025, at the National Institute for Biomedical Research (NIBR), President Félix-Antoine TSHISEKEDI presided over the official handover ceremony for laboratory reagents and equipment for the response to the MPOX epidemic in the Democratic Republic of Congo (DRC).

The donation included screening equipment, laboratories and other reagents, donated by Africa CDC (African Center for Disease Control and Prevention), in addition to new vehicles made available to the response by the Congolese government.

Before inspecting the equipment, the Head of State was briefed on the current situation of the Monkey Pox epidemic.

First to speak, the Director General of the Institut National de Santé Publique, Dr Dieudonné MWAMBA, presented the various advances in this response, namely “an increase in case notification, from around 3,000 suspected cases in 2022 to over 61,000 cases by the end of 2024; biological detection has improved, rising from 9% in 2022 to around 60% in 2024, even if considerable efforts are still needed to improve the accuracy of the diagnostic approach; and lethality has fallen from 4.5% in 2022 to 2.2% by the end of 2024”.

For his part, Africa CDC CEO Dr Jean KASEYA thanked the Head of State for his involvement in the MPOX response. He recalled that “in August 2024, President TSHISEKEDI disbursed 10 million US dollars to help fight this epidemic”.

Dr. KASEYA also raised the issue of MPOX screening in the DRC: at present, only the cities of Kinshasa and Goma are covered, and with this donation, seven other provinces will be added.

“Determined to help the Congolese government increase its fighting capacity, we have decided to allocate an envelope of 600,000 US dollars to pay the teams deployed in the field for the next six months to enable them to continue their work. We are doing our utmost to support and use our strong voice to call on partners to come and support the Congolese government”, said the CEO of Africa CDC.

The Minister of Health, Hygiene and Social Welfare, Dr Roger Kamba, thanked the President of the Republic for his presence at the ceremony and his personal involvement.

“This gift, which will enable our populations to access quality healthcare, wherever they are and whatever their living conditions, demonstrates that access to basic services is a priority for you”, he said in his

speech. We are aware that today's donation will enable us to diagnose and treat this disease more rapidly”, he concluded.

Discovered in 1970 in BASANKUSU, in the Equateur province of the DRC, MPOX is a pandemic disease. Individuals and communities have experienced the disease in forest areas, with animal-to-human transmission, through human-to-human contact with sick people, and through the consumption or handling of affected animals such as monkeys and small ruminants.

Communication Unit/Presidency of the DRC



Government activity

Judith SUMINWA lays the foundation stone for the construction of the RSNC building

Prime Minister Judith SUMINWA TULUKA laid the foundation stone for the new headquarters of the Remote Sensing National Center (RSNC) in Kinshasa on December 12, 2024.

Work on the five-storey building, which will take fourteen months to complete, will cost the Japanese government seven million US dollars. Nowadays, remote sensing is a scientific activity of the utmost importance for every country in the world, where it is used to forecast climate change, understand and manage soils and subsoils, monitor territories and visualize population movements. It is now omnipresent in all economic activities, and no country can do without it.

In his keynote address, Gilbert KABANDA KURHENGHA, Minister of Scientific Research and Technological Innovation, pointed out that remote sensing is an essential tool for implementing the first segment of the DRC's research and technological innovation policy, entitled "controlled knowledge of all the DRC's natural wealth and potential".

For this reason, he paid tribute to the President of the DRC, H.E. Félix-Antoine TSHISEKEDI TSHILOMBO, for his high level of diplomacy and his vision of the DRC's future, when he anticipated and laid the foundations for the development



of space sciences through the acquisition of a constellation of earth observation satellites specific to the DRC, and the collection of remote sensing data.

Minister Gilbert KABANDA KURHENGHA recalled that it was the President of the DRC who had asked the Japanese government to build and equip the RSNC to meet the standards of similar services for the reception and use of remote sensing data.

He thanked the Japanese ambassador to the DRC who, on arriving in Kinshasa, had

met the Head of State to express his determination to see the RSNC project through on behalf of the Japanese government.

Communication Unit of the Minister of QRTI and
Christian MAZONO



Activities of the Minister of SRT

Gilbert KABANDA proclaimed Doctor of Medicine at UNIKIN

The Minister of Scientific Research and Technological Innovation, Gilbert KABANDA, was proclaimed Doctor of Medicine by the Rector of the University of Kinshasa (UNIKIN), Professor Jean Marie KAYEMBE NTUMBA, at the defense of his diploma thesis entitled: “Target model for the management of sedentary military personnel in the Kinshasa garrison with and without hypertension, Impact of physical exercise”, on January 6, 2025 in Kinshasa.

Through this work, which has taken him almost ten years to complete, Dr Gilbert KABANDA KURHENGHA has observed that high blood pressure is ravaging the Armed Forces of the Democratic Republic of Congo (FARDC), particularly among senior officers.

This diploma thesis tackles a crucial issue: how physical activity can transform the life of a soldier and improve his performance. The results of this research highlight innovative solutions for the health of military personnel, and at the same time raise essential questions about the role of physical exercise in disease prevention.

Dr Gilbert KABANDA KURHENGHA succeeded in raising awareness of one of the major concerns of the army, the country's defense and sovereignty, namely the physical fitness of military personnel.

He pointed out that independence and sovereignty are inconceivable if the country is not secure. Doctor KABANDA KURHENGHA noted that this weakness dates back some thirty years. He wanted to prove it, not by reading books, but by learning from FARDC doctors and nurses who have examined our well-known soldiers to demonstrate that their cardiorespiratory condition is incompatible with the life of a normal soldier. Consequently, with the conduct of operations.



Minister Gilbert KABANDA supported and praised by his peers

The Minister pointed out that, following the example of other countries, “the conditioning of the army must place major emphasis on cardiorespiratory fitness”. The laureate recalled that the FARDC has over 90% infantrymen who fight on foot, who walk and who have breath. A hypertensive or obese soldier has no breath, he stressed.

He recommended that the military High Command give importance to the conditioning, preparation for operations and cardiorespiratory condition of our infantrymen.

The Rector of UNIKIN, Professor Jean Marie KAYEMBE NTUMBA, President of

the ceremony, presented Minister Gilbert KABANDA with the diploma, gown and pennant of the University of Kinshasa.

The ceremony was attended by several personalities. These included: the First Lady, Denise NYAKERU TSHISEKEDI, the Minister of Higher Education and Universities, Marie-Thérèse SOMBO, the Secretary General of SRTI, Odon NDAMBU and the President of NSC, Professor MPIANA TSHIMANKINDA Pius.

Communication Unit of the Minister of RSTI (Pascal MA-SIRIKA BISIMWA ConsCom MRST Photos: Glody Kusikil)

NSC holds its 55th ordinary session 2024

The National Scientific Council (NSC) held its 55th ordinary session on Wednesday December 18, 2024 in the "MBOKA SIKA" room at the Kasai Building, Place Royal, in Gombe township.

This 55th ordinary session began with a presentation by the President of the NSC, Professor Pius MPIANA TSHIMANKINDA, who insisted on the participation of members in the ordinary sessions of the NSC and recalled that the related decisions are binding on the Research Institutions.

The session focused on a number of points, including the reading and adoption of the minutes of the 54th ordinary session of the NSC held on September 18, 2024, review of the record of decisions and recommendations made at the 54th ordinary session of the NSC, adoption of the organic framework of the Research Center for Water and the Environment (RCWE), processing of mission reports by researchers from the Research Institutes, the calendar of scientific days for the Research Institutes for 2025, specific bonuses for SRTI



staff, review of appointment and promotion files for agents and executives of the Research Centers and Institutes, and miscellaneous.

With regard to appointments and promotions of staff and executives of Research Centers and Institutes, the NSC received and examined files from the following institutions: Research Center for Geology and Mining (RCGM), Center for Multidisciplinary Development

Research (CMDR/Bunia), French General Commissariat for Atomic Energy (CAE), Research Center for Human Sciences (RCHS), Center for Chemical, Biological, Radiological and Nuclear Excellence (CoE-CBRN) and National Institute for Agronomic Study and Research (NIASR) and Research Center for Geophysics (RCG).

The session closed with a number of points raised under miscellaneous. The President urged participants to avoid conflicts between members of the Management Committee. A number of recommendations were made and decisions taken to ensure the smooth running of the Research Institutions.

MAZONO Christian/NSC

Échoes of Research Institutions

RSNC organizes Science Days to promote science and technology

The provincial city of Kinshasa vibrated from December 10 to 11, 2024, to the rhythm of the scientific days organized by the National Center for Remote Sensing, NCRS in acronym, at the Pilot National Institute for the Teaching of Health Sciences.

It was under the theme "Remote sensing to promote science and space technologies to ensure peace in the Democratic Republic of Congo" that experts in this sector met for two days.

In his welcome address, the Director General of the Centre National de Télédétection, Professor David NGINDU BUABUA, declared that the aim of these scientific meetings was to make advances in the field of remote sensing in the Democratic Republic of Congo, to improve the visibility of the Centre National de Télédétection and to present the results

of the research carried out by its researchers. He went on to talk about the major challenges facing the DRC in terms of sustainable development

"Challenges don't have to stay, they have to find solutions. And remote sensing is a major tool; that's why it's not just climate change that's a challenge, but also mining. There are mines where the site has been obtained illegally, and remote sensing can provide the Congolese government with real-time information to detect real mines that have been subject to legislation and illegal mines, so we can come to our senses and make progress in this sector", he declared.

For his part, the RSNC's Deputy General Manager, Mr. Mike TSHIMBALANGA, returned to the legal aspects of this establishment, in particular Decree n° 18/006 of April 24, 2018 Setting up a Center of

a scientific and technical nature called the National Center for Remote Sensing.

"From this decree, it should be noted that the Center is under the regime of a Public Scientific and Technical Establishment with legal personality. It is therefore a legal entity under public law, with administrative and financial autonomy. In other words, it has its own rights and obligations, and its own administration and budget, distinct from those of the State.

Every member of staff should be aware of the need to familiarize themselves with the rules set out in the various legal and regulatory texts governing our establishment," he said. RSNC experts and other speakers addressed the following topics :

- progress in Japan-DRC cooperation;
- the contribution of remote sensing work carried out before 2000 to the so-

cio-economic advancement of the DRC, the contribution of the Geographic Information System (GIS) in the cartographic study of water wells and their risks: the case of the RIGHINI, LIVULU and SALONGO quarter in Lemba township;

- Advanced Application of Remote Sensing in Environmental Protection and Conflict Prevention, an innova-

tive solution for satellite monitoring of water resources in the DRC;

- the impact of recruitment and turnover on organizational performance...

The meeting was attended by the representative of the Minister responsible, Dr. Gilbert KABANDA, the Representative of the Ambassador of the Empire of Japan in the DRC, the Secretary General for Scientific Research and Technological Innovation, Odon NDAMBU,

the Chairman of the National Scientific Council, Professor Puis MPIANA, members of the Management Committees, agents and executives of the National Center for Remote Sensing, and many other participants

Jeanpy Kalombo/ NCRS



Construction of the NCRS building: a source of pride for research

On Thursday, December 12, 2024, the National Remote Sensing Centre (NRSC) was delighted to attend the ceremony to lay the foundation stone for its new building at the junction of Lubefu and Batetela street in Gombe township.

The ceremony, presided over by the Prime Minister and Head of Government, Madame SUMINWA TULUKA Judith, testifies to the need for the Democratic Republic of Congo to equip itself with a National Centre for Remote Sensing to observe geophysical phenomena, study the soil and subsoil, and monitor water and forests.

In his welcome address, the General Manager of the National Remote Sensing Center, Professor David NGINDU BUABUA, clearly moved by the occasion, thanked the government and the Empire of Japan for fulfilling the wishes of the Head of State, HEM Felix-Antoine TSHISEKEDI TSHILOMBO, at the origin of this state structure, whose services will benefit many vital sectors of the Democratic Republic of Congo. "Today, we are witnessing the laying of the foundation stone, an important event marking a new era, the start-up of our

institution", declared the General Manager.

Taking the floor, the project owner (JICS), Engineer ACHILLE MATE, briefly presented the model of the new NRSC headquarters. It will be a 5-storey, U-shaped building. On the ground floor will be a reception hall, a multi-purpose room for 150 people and a cafeteria. On the first level, a large training meeting room, a satellite image download and auto rectification room, an expert office and the procurement department. On the second level, the finance and accounting offices, human resources, the marketing department and the communications department. The 3rd level houses the IT department, with a data center comprising a large modern server room. And on Level 4, the offices of the various directors and their assistants.

Before moving on to the highlight of the event - the laying of the foundation stone - the Minister in charge, SEM Gilbert KABANDA, paid a vibrant tribute to the President of the Republic, SEM Félix Antoine TSHISEKEDI, and praised his vision for the development of space sciences, requesting the Japanese

government to build and equip the NRSC to meet the standards of similar services for the collection and use of remote sensing data.

The ceremony ended in a convivial atmosphere with a family photo of all the personalities present, symbolizing a collective commitment to the development of the Democratic Republic of Congo.

Jeanpy Kalombo/NRSC

CCBRNE DRC National Action Plan ready for validation in 2025

The Center for Chemical, Biological, Radiological and Nuclear Excellence (CCBRNE) organized a preliminary validation workshop for the CCBRNE National Action Plan (PAN) on December 27, 2024 in the Père BOKA room at CEPAS in Kinshasa.

After the official opening by the Coordinator and National Focal Point, Professor Thierry TANGOU TABOU, participants reviewed the conclusions of the first meeting held in November 2024. A family photo followed the introductory words of the Coordinator and National Focal Point, before the 4 working groups addressed the specific strategic axes: chemical, biological, radiological, nuclear, and a cross-cutting CCBRNE group.

Feedback from the groups enabled the strategic action matrix to be validated internally, with minor adjustments still to be incorporated. This work paves the way for the



Professor Thierry TANGOU TABOU

official validation workshop of the PAN-CBRN/ DRC, scheduled for the first quarter of 2025. This event marks a decisive step towards strengthening national capacities in CBRN risk management.

The day ended at 5:00 pm, under the banner of



Photo de famille des agents de CoE

unity and professionalism, with a final rendition of the national anthem.

Communication Unit CCBRNE DRC



RCMD/Bunia office building

RCMD/Bunia Celebrates 31 Years of Research and Development Despite Challenges

The Research Center for Multidisciplinary for Development (RCMD/ Bunia), a, celebrated its 31st anniversary on September 23, 2024. Founded in 1993, RCMD//Bunia has played a crucial role in the development of the northeastern region of the Democratic Republic of Congo.

Over the past three decades, RCMD/Bunia has conducted in-depth research in a variety of fields, including the humanities, life sciences, applied sciences and technologies. Its contributions have been essential in addressing regional challenges and improving the lives of local communities.

The center has published numerous research articles, organized conferences and provided training for researchers and community members. According to the members of the Management Committee, RCMD/Bunia faces many challenges. These include lack of funding, inadequate infrastructure and very limited resources. The center's aging equipment, inadequate premises and lack of a dedi-

cated library hamper its research activities. In addition, many staff members receive no base salary, bonuses or other benefits.

To overcome these challenges and ensure the center's sustainability, the RCMD/Bunia has formulated several recommendations. These include :

- increased government funding: the Congolese government should allocate sufficient funds to cover the center's operating costs and support its research activities.
- improved infrastructure: the government should provide the RCMD/Bunia with a permanent building, modern equipment and a well-equipped library.
- improving staff welfare: the center's employees should enjoy competitive salaries, social benefits and adequate working conditions.
- Strengthening partnerships: RCMD/Bunia should collaborate with other research institutions, universities and international

organizations to promote knowledge exchange and capacity building.

Finally, RCMD/Bunia appealed to the Congolese government and the international community to recognize the importance of the Center's work and provide the necessary support. By taking up the Center's challenges, the government will empower local communities, promote sustainable development and strengthen the country's research capacities.

Jean-Luc BALOGIJE SELENGE RCMD/Bunia.

ATSRC hosts a scientific conference in Kinshasa

On November 29, 2024, the Research Center for Applied and Technological Sciences (RCATS) organized a scientific conference in Kinshasa on the theme: "Building clay houses in an era of global warming, the case of the Mont Ngafula township in Kinshasa/DRC".

This scientific conference was led by researcher Dieudonné MAKINISI GUBONGA from ATSRC's Department of Appropriate Materials and Technology (DAMT). The theme was the scientific contribution of clay to house construction.

The speaker gave a general overview of global warming. As a result, our cities, including Kinshasa, are experiencing very high temperatures, making some houses uninhabitable.

According to him, clay, the building material used by mankind since ancient times, has been abandoned in favor of other so-called modern materials, but these have not solved the problem of global warming.

The speaker drew his inspiration from habitats such as termite mounds, so-called bioclimatic habitats built by termites, in which temperature is regulated automatically through the orifices provided. Waste management and food self-sufficiency are achieved without recourse to outside sources. Clay is available in every province of the Democratic Republic of Congo. Mont Ngafula township has several clay extraction sites: Kimwenza Gare, Cecomaf and Lutendele. Clay construction is affordable and offers numerous environmental and socio-economic advantages.

The researcher demonstrated other advantages of clay bricks. They are environmentally friendly and pose no health hazard. They are also durable, recyclable and hygrothermal. In other words, clay bricks regulate temperature and humidity inside homes, reducing the cost of air conditioning and heating.

The scientist concluded that, due to the inaccessibility of certain towns and villages, the con-

struction of schools, health centers and other buildings under the PDL de 145 Territoire programme of the government of the Democratic Republic of Congo, can be achieved by relying on the assets of clay. This available material can be extracted and manufactured using local labour, often without the need for skilled workers.

Dieudonné ATITUNGU SANGOL/ATSRC

The CEA 2025 greetings card

To their Excellencies the President of the DRC, the Prime Minister of the DRC and the Minister of Scientific Research and Technological Innovation

As we begin the year 2025, I wish you all the very best. May this year be for you a period of achievements, challenges and successes, both in your personal life and in your commitments to the service of the Nation. Your unwavering commitment to the interests of the Congolese people, your enlightened leadership and your vision of progress for the Democratic Republic of Congo continue to nourish the hope and determination of an entire people. You work selflessly to improve the living conditions of your compatriots, and it is with deep respect that I encourage you to continue this noble mission for the well-being of our nation.

May this New Year bring you the strength you need to pursue your noble commitment, and may your efforts contribute to a prosperous future for our country and its people. I wish you every success and satisfaction in all your



endeavours. With deep respect, I send you my most sincere wishes for a year 2025 rich in success and achievement. Professor Steve MUANZA General Commissioner

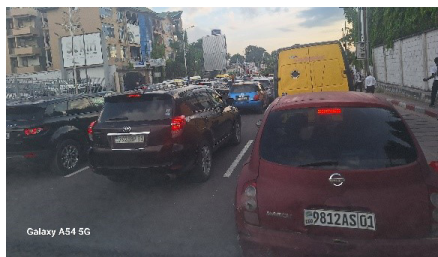
Professor Steve MUANZA, General Commissioner
CEA

Air pollution in Kinshasa: KinAQ reveals a threat to health

Kinshasa, capital of the Democratic Republic of Congo, is suffocating under a cloud of pollution. A recent study carried out in the Binza Météo health zone by the Kinshasa Air Quality (KINAQ) research team, led by Dr BALOGIJE SELENJE Jean-Luc, MPH, and Ir KASEREKA ISEVULAMBIRE Paulson, reveals a worrying link between air quality and the health of residents, particularly asthmatics. KINAQ is an air quality monitoring project implemented in Kinshasa in partnership with WASARU Asbl (Water and Sanitation in Rural and Urban areas), Westervelt Aerosol Group - Columbia University (USA) and Energy Policy Institute at the University of Chicago (EPIC).

For two months, researchers analyzed air quality in various districts of the Binza Météo health zone in the Ngaliema township. The results were alarming: fine particle pollution, particularly PM_{2.5}, far exceeded the standards recommended by the World Health Organization (less than 10 µg/m³ for the daily average, i.e. an air quality index of less than 50). This index shows that the air breathed in Kinshasa is of very poor quality. The particles that pollute the air we breathe, invisible to the naked eye, penetrate deep into the lungs and can cause serious respiratory problems, including

absence of asthma in the area studied. Air pollution is a major risk factor for many other diseases, including cardiovascular diseases such as stroke, lung cancer and chronic respiratory problems. For asthma sufferers, exposure to polluted air can worsen symptoms and increase the risk of hospitalization. The causes of this pollution are manifold: heavy road traffic, poor urban sanitation, the use of low-quality fuels, industry, factories and domestic activities. The situation is all the more worrying in that the concentration of fine particles has more than doubled in five years, rising from 43 µg/m³ at 2019 to 110 µg/m³ in September 2024. Faced with this critical situation, the Kinshasa Air Quality (KINAQ) project team suggests that urgent measures be taken to improve air quality in Kinshasa. Possible solutions include:



a view of the traffic jams in Kinshasa



Landfill management remains a major air quality challenge

- Good solid and liquid waste management to reduce pollutant emissions.
- Setting up air quality monitoring systems to inform the population and the authorities, while monitoring the evolution of the situation.

Air pollution in Kinshasa represents a serious threat to the health of the population. It is urgent to take measures to improve the quality of the air we breathe and protect the most vulnerable.

Kinshasa Air Quality and its team remain open to any collaboration aimed at monitoring air quality in DR Congo. Sharing air quality data free of charge, and raising awareness of the health risks of exposure to polluted air in various public environments (schools, markets, roads, mines, etc.) remains its hobbyhorse, in collaboration with public institutions, private companies and interested researchers.

Jean-Luc Balogije Selenge/RCMD/Bunia

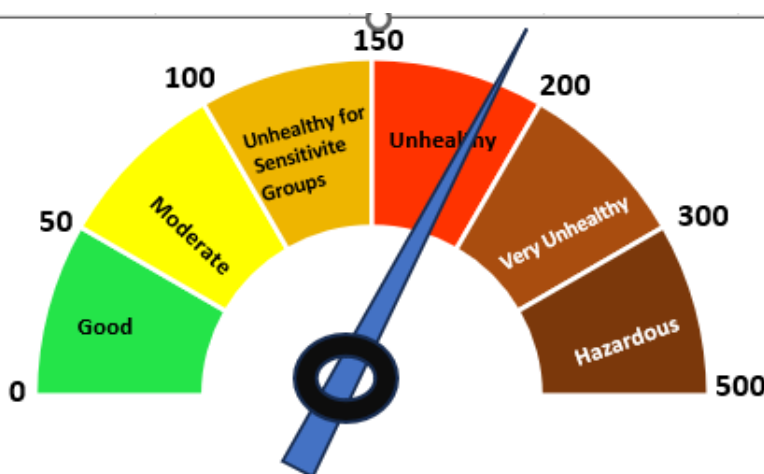


Fig. 7: Echelle de la qualité de l'aire dans la ZS BINZA Météo

asthma attacks. The study showed that 13.58% of Binza Météo residents suffer from asthma. This high rate could be linked to poor air quality. In fact, the researchers established a direct link between concentrations of fine particles and the prev-

- Good management of road traffic by encouraging less-polluting vehicles and soft modes of transport..
- Improving the quality of fuels used for cooking and limiting the use of polluting fuels.



Genetic resources value chains, ABS permits, AI and translational research: A strategy for universal health coverage in the DRC "

Genetic resources value chains, ABS permits, AI and translational research: A strategy for universal health coverage in the DRC "

The Democratic Republic of Congo (DRC), endowed with exceptional biodiversity, can transform its genetic resources into levers for achieving universal health coverage (UHC). Value chains, from collection to marketing of derived products, combined with the Access and Benefit Sharing (ABS) mechanism, offer a unique opportunity to develop accessible and sustainable medicines.

The integration of artificial intelligence (AI) and translational research reinforces this dynamic by accelerating the validation of the pharmacological properties of local plants, such as *Rauvolfia vomitoria* and *Prunus africana*.

AI, using phytochemical databases and predictive algorithms, can rapidly identify bioactive molecules, simulate their biological interactions and optimize molecular screening.

Translational research, by integrating these discoveries into clinical trials and medical practice, ensures a bridge between basic research and practical application

for healthcare adapted to local realities. By structuring an effective framework for ABS licensing, transforming resources locally into high value-added products, and actively involving local communities in an equitable sharing of benefits, the DRC can generate substantial revenues to subsidize healthcare and strengthen its health infrastructure.

Inspired by examples such as South Africa's Rooibos and Madagascar's vinblastine, the DRC, thanks to AI and translational research, can not only add value to its biodiversity, but also become a model of sustainable development and innovation in public health. It should be noted that value chains for genetic resources encompass the steps adding value to a resource, from its collection to its transformation into marketable products, while Access and Benefit Sharing (ABS) permits, established by the Nagoya Protocol, regulate the equitable exploitation of genetic resources and associated knowledge. Within this framework, universal health coverage (UHC) aims to guarantee equitable access for all to essential health services without financial hardship.

Artificial intelligence (AI) plays a key role in accelerating the identification of bioactive molecules and optimizing the develop-

ment of new drugs. In addition, translational research, linking fundamental discoveries to clinical applications, enables innovations derived from genetic resources to be rapidly integrated into healthcare.

All this must be part of a sustainable development perspective, which preserves biodiversity while ensuring equitable and profitable exploitation for current and future generations. The DRC, with its exceptional biodiversity, has a unique potential to mobilize these concepts to promote inclusive health and sustainable development of its natural heritage.

Prof. NGBOLUA KOTO-TE-NYIWA

At the time of Innovation

Zena Care Hair Oil improves frizzy hair

ZenaCareHairOil,anoil concocted fromoliveoil andnatural plants such as rosemary, clove, aloe vera and moringa.

Zena Care Hair Oil stands out for its ability to deeply nourish, protect and moisturize hair. It also helps keep hair looking natural. It's ideal for all textures. It's also versatile: individual care, complementaryingredientordaily moisturizer, it's got it all.

A local product, a global ambition The product is currently sold on the market in Bukavu, capital of South Kivu Province. But orders are pouring in from all over. Zena Care Hair Cosmetics promises access to its product beyond the borders of BUKAVU.

It was created by the innovative Zena Risassi Yolande. She is currently Managing Director of Zena Care Hair Cosmetics. The SME remains dynamic and is making waves in Bukavu's cosmetics industry.

Christian MAZONO/NSC and all in grands lacs



Read for you

MPOX in the DRC: the WHO Emergency Programme's D.E.A. arrives in Kinshasa

The Deputy Executive Director of the World Health Organization's (WHO) Emergencies Program, Dr CHIKWE IHEKWEAZU, is visiting the Democratic Republic of Congo from January 19 to 25, 2025 to strengthen advocacy around the response to the MPOX epidemic..

During his stay, Doctor CHIKWE IHEKWEAZU plans to meet senior government officials, donors and health partners in the DRC. He will make field visits to assess progress in the response to the MPOX epidemic in Kinshasa.

Dr. IHEKWEAZU will also take part in the inauguration of the Kinshasa Mpox Reference Center, built with the support of the UK Foreign, Commonwealth and Development Office (FCDO).

In Goma, North Kivu province, he will hold talks with local authorities to intensify ongoing efforts, while reaffirming WHO's support. According to the latest statistics from the Ministry of Health, since the start of the MPOX epidemic, the DRC has re-



Dr Chikwe Ihekweazu, Deputy Executive Director, WHO Emergency Program

corded 66,063 cases, including 14,417 confirmed cases (positivity rate), and 1,366 deaths (case-fatality rate 2.07%).

As a reminder, on Wednesday August 14, 2024, the African Centre for Disease Surveillance and Prevention (CDC Africa) de-

clared the MonkeyPox epidemic to be a public health emergency in view of the outbreak of cases on the African continent.

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PUBLIC-SECTOR RESEARCH CENTERS AND INSTITUTES IN THE D.R. CONGO

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<p>RCHS (Research Center in Human Sciences) <i>Objective: To ensure the human development of the Congolese people through the study of its social, economic and political dimensions with a view to identifying the factors that have a positive or negative influence on its development.</i> Address: 33, Av. comité urbain C/ Gombe; E-mail: mingashang@yahoo.fr; Tel: 0819377821</p>	<p>NDRC (Nutritional Diseases Research Center/Gemena) <i>Objective: Research into diseases linked to malnutrition, such as related diseases by isolating certain molecules, such as SYZYSIUM GUINESIE to combat amoebic yeasts and diarrhea in South Ubangi.</i> Address: Mobutu n° 220/A. GEMENA/ SOUTH UBANGI PROVINCE; E-mail: cherusangi@yahoo.fr; 0992416091</p>
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<p>AIPS (African Institute of Prospective Studies) <i>Objective: To carry out forward-looking studies in order to propose solutions to crises and problems linked to the evolution of African societies.</i> Address: Av. Cardinal Malula, C/ Lemba; E-mail: mgrtarcibangu@yahoo.fr; Tel: 0996658741</p>	<p>HRC (Hydrobiology Research Center in Uvira) <i>Objective: To program, coordinate and monitor research activities in hydrobiology, limnology and hydrology.</i> hydrobiology, limnology and fisheries in all ecosystems. Address: 115, AV. du Congo, Q/Kimanga, C/Kalundu, UVIRA / SUD KIVU; E-mail: bida-kamuhoza@gmail.com; Tel: 0997716307.</p>
<p>MDRC (Multidisciplinary Development Research Center/Matadi) <i>Objective: To carry out operational research in central Congo in the field of applied linguistics of African cultures and applied sciences</i> Address: Hôtel de la porte Matadi; E-mail: Mwanzanicolas5@gmail.com; Tel: 0815037949</p>	<p>CoE/CBRNEC (Chemical, Biological, Radiological and Nuclear Excellence Center) <i>Objective: To contribute to the mitigation of chemical, biological, radiological and nuclear risks.</i> Address: 106, Blvd du 30 Juin, C/Gombe; E-mail: Odette.kabena@gmail.com; Tel: 0816904370.</p>
<p>NCPIR (National Committee for the Protection of ionizing Radiation) <i>Objective: - Regulatory authority for protection against the dangers of ionizing radiation in the DRC management of radioactive sources of radioactive materials such as uranium.</i> Address: 4675, Av. Colonel Ebeya, Immeuble Quitus 2ème niveau; Email: Flory1963@gmail.com; Tel: 0816684665</p>	<p>GVO (Goma Volcanological Observatory) <i>Objective: Prevention of volcanic risks by monitoring volcanoes and Lake Kivu.</i> Kivu; Management of natural risks; scientific research. Address: 142, Avenue Du Rond Point ; Quartier Les Volcans ; Commune de Goma ; Ville Goma; North-Kivu; E-mail: mavotulu@gmail.com; Tel: 0998584734</p>
<p>AEC (French Atomic Energy Commission) <i>Objective: To carry out, promote and coordinate scientific and technical research in various fields of science and industry, concerning the use of atomic energy and space research.</i> Address: UNIKIN building; E-mail: Steve.muanza.kamunga@gmail.com; Tel: 0808643248</p>	<p>WERC (Water and Environment Research Center) <i>Objective: To serve as a training and research center focusing on water and environmental management.</i> To propose solutions to problems that could arise around water. Create a national network of Congolese scientists and researchers to analyze and disseminate information on the impact of climate change in the DRC. Promote education and the right to the environment. Address: 44, Comité Urbain C/ GOMBE; E-mail: ngelipatience@gmail.com; Tel: 0818105625.</p>
<p>CGI (Congo Geographic Institute) <i>Objective: Production of the base map of the DRC at a scale of 1/50,000 and its derivatives.</i> Address: 106, Blvd du 30 Juin, C/Gombe; E-mail: Fidele.balibuno@unikin.ac.cd; Tel: 0974449240</p>	<p>RCSARP (Research Center for the Selection and Adaptation of Ruminants and Pigs) <i>Objective: To carry out studies and research in the field of ruminant and pig breeding</i> Address: 45, Av. Lumumba, Q/de la gare, LUPUTA/ KASAI-ORIENTAL; E-mail: tshamalagabriel@gmail.com; Tel: 0851817370</p>
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<p>NIASR (National Institute for Agronomic Study and Research) <i>Objective: To promote the development of agriculture in the Congo. To maintain varieties, multi-local trials, and its farmers, management and conservation of germplasm. Set up a program to monitor and evaluate research activities.</i> To disseminate new varieties. Give the emerging technical department its reason for being, with a view to producing basic and pre-basic seed. Resume publication of the agricultural magazine to disseminate research results. Address: 13, Av. des Cliniques, BP :2037 KINSHASA, C/Gombe; E-mail: domikankonde@yahoo.fr; Tel: 0818248620</p>	<p>CAS (Congolèse Academy of Sciences) <i>Objective: Promotion and dissemination of science, technology, arts and letters. Support for inventive initiatives.</i> Address: Sciences Faculty/ UNIKIN local 28; E-mail: jlmuyembet@gmail.com; Tel: 0813330242</p>
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3. supervising the financial management of research centers and institutes
4. approving the budgets of the Research Institutes and Centers and submitting them to the Minister for Scientific Research for approval
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