



**SDG7 Energy Compact of African Network for Solar Energy (ANSOLE)**  
**A next Decade Action Agenda to advance SDG7 on sustainable energy for all, in line with the goals of the Paris Agreement on Climate Change**

**SECTION 1: AMBITION**

**1.1. Ambitions to achieve SDG7 by 2030.** [ Please select all that apply, and make sure to state the baseline of each target]

(Member States targets could be based on their NDCs, energy policies, national five-year plans etc. targets for companies/organizations could be based on their corporate strategy)

**7.1.** By 2030, ensure universal access to affordable, reliable and modern energy services.

ANSOLE (African Network for Solar Energy) is a network of universities, research organizations, civil society organizations, and professionals in Africa, Europe and beyond dedicated to advance SDG7 and other sustainable development goals in Africa. Different types of organizations with different funding streams and local support networks can participate through ANSOLE to meet shared objectives to meet sustainable development goals and to aspire towards [Agenda 2063: The Africa We Want](#).

The ANSOLE network enables North (Europe) ↔ South (Africa), Pan-African and interregional cooperation in research and innovation, education and training, and public engagement through participation in the network minimizing bureaucracy where possible. Communication is through the ANSOLE network and its information portals lessens the need for government-to-government agreements or of a central organization dealing with the laws and regulations of specific states. Organizations that participate in ANSOLE comply with local laws and conditions in organizing events, administering scholarships and grants, and fulfilling obligations under training programs organized by ANSOLE network partner organizations. The ANSOLE network provides a framework for action towards the strategic goals of the network whose overriding goal is SDG7.

ANSOLE partners conform with local laws, regulations and plans but benefit from and participate in the ANSOLE network by simply becoming a member of the network of independently operating organizations working to achieve SDG7. ANSOLE is dedicated to building capacity – Pan-African, regional, national, and local – consisting of educated and trained, highly skilled people, and the capacity for research and innovation in energy-related fields to enable SDG7 in Africa.

The focus of ANSOLE’s Electrify Africa 2030 initiative is Sub-Saharan Africa (SSA), which includes the AU member states with the greatest electricity access deficit<sup>1</sup>. Based on current trends 600 million people will not have access to affordable electricity by 2030 of which 560 million are expected to live in SSA. ANSOLE will work with universities and other partner organizations to build or add critically needed research capacity and trained human resources to accelerate progress towards SDG7 in Africa. ANSOLE will also work with civil society organizations including local religious organizations to train and motivate communities to advance SDG7 and other SDGs through activities directed towards building public awareness and educating youth and children through initiatives such as Theatre for Development (TFD).

Target(s): (In terms of capacity building to enable universal access to affordable, reliable, and modern energy services in Africa). A detailed plan for human resources and research capacity will be developed in collaboration with the African Union Commission and other stakeholders and continuously updated.

**Higher education for energy researchers - Sandwich Graduate School - 20 gender balanced PhD-students/year**

**Mobility: 3-12 months research secondments - 100/year**

<sup>1</sup> Pg. 40 “TRACKING SDG 7: The Energy Progress Report 2022, [https://trackingsdg7.esmap.org/data/files/download-documents/sdg7-report2022-ch1-access\\_to\\_electricity.pdf](https://trackingsdg7.esmap.org/data/files/download-documents/sdg7-report2022-ch1-access_to_electricity.pdf)

	<p><b>Online databases and match-making platform of researchers, infrastructure &amp; equipment across Africa and cooperating research institutions in Europe and elsewhere via ANSOLE’s web portals.</b></p> <p>Meetings: Annual ANSOLE DAYS, topic specific workshops, summer schools, science camps and other events.</p> <p>Communications via the -E-ANSOLE portal and establishing the peer-reviewed African Journal of Solar Energy</p>	<p>Time frame: The overarching goal is to electrify Africa by 2030. It is critically important to secure funding to build human resources and research capacity as soon as possible to enable energy systems to be deployed to meet the goal of enabling access to 300 million people by the end of 2025 and 600 million by 2030 of which 560 million are in SSA.</p> <p>Context for the ambition(s): Africa and specifically the SSA has the greatest number of people without access to electricity and more states with high electricity access deficits than any other continent<sup>2</sup>. Africa’s access deficit parallels investment in research and innovation with SSA states being significantly below world averages<sup>3</sup>. Africa urgently needs to expand the number of trained specialists, PhD scientists and to make more effective use of research infrastructure across the continent. Needs vary across the Continent with regional differences. ANSOLE as a pan-African network linked with universities in Europe and beyond that is supported by shared information platforms used by organizations participating in the ANSOLE network can facilitate pan-African cooperation in an environment of increasing income and capacity differences aggravating language and cultural differences among the states and regions of the Continent.</p>	
	<p>Target(s): Time frame: Context for the ambition(s):</p>		
<p><input type="checkbox"/> <b>7.3.</b> By 2030, double the global rate of improvement in energy efficiency.</p>	<p>Target(s): Time frame: Context for the ambition(s):</p>		
<p><input type="checkbox"/> <b>7.a.</b> By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.</p>	<p>Target(s): Time frame: Context for the ambition(s):</p>		
<p><input type="checkbox"/> <b>7.b.</b> By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programs of support.</p>	<p>Target(s): Time frame: Context for the ambition(s):</p>		

<sup>2</sup> Ibid Pg. 37-38

<sup>3</sup> <https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?locations=ZG>

**1.2. Other ambitions in support of SDG7 by 2030 and net-zero emissions by 2050. [Please describe below e.g., coal phase out or reforming fossil fuel subsidies etc.]**

Facilitate the development of a multi-institutional, pan-African center of excellence in solar energy research whose objective is to accelerate achievement of SDG7 in Africa with particular emphasis on Sub-Saharan Africa, through the development and adaptation of technologies suited to meet the needs in Africa for affordable, modern energy with reliable distribution to advance all SDG's in the Continent.

Target(s):

Time frame: Strategic plan developed and approved by the member institutions by the 31/12/2023.

Context for the ambition(s): Achievement of SDG7 in Sub-Saharan Africa has been hindered by the reality that solar technologies have not been designed for the relatively unique conditions across much of Africa. The African Solar Energy institute is conceived as a multi-institutional center of research and innovation excellence whose development will draw-on and be an expression of the ANSOLE pan-African network of expertise addressing the energy challenge of Africa and its regions and member states.

**SECTION 2: ACTIONS TO ACHIEVE THE AMBITION**

2.1. Please add at least one key action for each of the elaborated ambition(s) from section 1. [Please add rows as needed].

<p><b>2.1.1. Ambitions to achieve SDG7 by 2030.</b> Secure funding for and administer a program to fund 20 PhD students from Africa at ANSOLE partner universities in Europe, U.S., Canada and other participating countries. Work with UNESCO, EU Commission, other development assistance organizations</p>	<p>01.01.2023 – 31.12.2030</p>
<p><b>2.1.2. Ambitions to achieve SDG7 by 2030.</b> MOBILITY – It is very important to foster South-North and North – South staff exchanges between Universities in Europe and Africa and within Africa between Northern Africa and Sub-Saharan Africa to build research and innovation capacity in Africa as well as to enable greater understanding of the challenges of addressing Africa's energy needs and climate change. We are setting an initial target of 100 secondments of 2 to 12 months per annum by a consortium of cooperating universities, other institutions and SMEs in Africa looking for support from Horizon Europe MSCA Staff Exchange, UNESCO programs and other sources. MSCA Staff Exchange have a call with a deadline 08 March 2023, that could potentially fund exchanges 2024-2028. The MSCA Staff exchange also includes conferences and workshops that could be used to widen and deepen the impact of individual researchers and energy innovators serving secondments at member institutions of the ANSOLE-MSCA consortium.</p>	<p>October 2022—31.12.2030</p>
<p><b>2.1.3. Ambitions to achieve SDG7 by 2030.</b> Online databases and match-making platform of researchers, infrastructure &amp; equipment across Africa and cooperating research institutions in Europe and elsewhere via ANSOLE's web portals. The staff exchanges of 2.1.2 will require such a database which can then be built and expanded to include research infrastructure and research equipment to accelerate expansion of research capabilities through cross-border sharing of infrastructure. ANSOLE is a Pan-African network of researchers, innovators linked with universities. SMEs and other organizations advancing SDG7 in Africa. The online portal and databases will enable the network to expand and strengthen its effectiveness and deepen the impact of its action.</p>	<p>October 2022-31.12.2030.</p>
<p><b>2.1.4. Ambitions to achieve SDG7 by 2030.</b> Meetings: Annual ANSOLE DAYS, topic specific workshops, summer schools, science camps and other events. ANSOLE DAYS are annual conferences that have taken place in Europe or in Africa. With the formulation of the ANSOLE Energy Compact each annual conference will provide opportunities to not only exchange knowledge on progress across the ANSOLE network but to also mark milestones towards achieving the goal of electrifying Africa by 2030. - <b>Topic Specific workshops</b> – Examples - Distributed energy financing workshops, energy outreach by churches and other religious organizations.</p>	<p>October 2022-31.12.2030</p>

<ul style="list-style-type: none"> <li>- <b>Summer schools</b></li> <li>- <b>Science camps – Start with one in 2023 and attempt to expand to at least one other country in Africa each year.</b></li> <li>- <b>African student energy prize(s) – To be awarded during ANSOLE DAYS</b></li> <li>- <b>Training programs in cooperation with universities, national agencies and international organizations. Examples – solar energy installation.</b></li> </ul>	
<p><b>2.1.5. Ambitions to achieve SDG7 by 2030.</b>  <b>Communications via the -E-ANSOLE portal and establishing the peer-reviewed African Journal of Solar Energy</b></p> <ul style="list-style-type: none"> <li>- Monthly newsletter –</li> <li>- ANSOLE LinkedIn group</li> <li>- Peer-reviewed African Journal of Solar Energy – Target 01.01.2024 for launch</li> </ul>	

<b>SECTION 3: OUTCOMES</b>	
3.1. Please add at least one measurable and time-based outcome for <b>each</b> of the actions from section 2. <i>[Please add rows as needed]</i> .	
<p><b>3.1.1. Ambitions to achieve SDG7 by 2030.</b>  20 additional PhDs in solar energy related fields per annum would result in as many as 140 additional PhD energy researchers and specialists for Africa by 2030.</p>	<i>Date</i>
<p><b>3.1.2. Ambitions to achieve SDG7 by 2030.</b>  500 to 700 secondments by 2030 with 50 to 100 SMEs resulting from the secondments, &gt;500 published research papers.</p>	
<p><b>3.1.3. Ambitions to achieve SDG7 by 2030.</b>  Online databases and match-making platform of researchers, infrastructure &amp; equipment across Africa and cooperating research institutions in Europe and elsewhere via ANSOLE’s web portals. Effectively using these online databases and matchmaking platform will encourage more effective use of highly valuable research infrastructure by more African scholars and to link African experts to specific problems that they can help to address to accelerate renewable energy deployment and modern energy access</p>	
<p><b>3.1.4 Ambition to achieve SDG7 by 2030.</b>  Meetings: Annual ANSOLE DAYS, topic specific workshops, summer schools, science camps and other events. The cumulative total of presentations, research papers and reports accessible to members of the ANSOLE network will improve knowledge dissemination and knowledge access across Africa.  ANSOLE DAYS are annual conferences that have taken place in Africa and/or Europe. With the formulation of the ANSOLE Energy Compact each annual conference will provide opportunities to not only exchange knowledge on progress across the ANSOLE network but to also mark milestones towards achieving the goal of electrifying Africa by 2030.</p> <ul style="list-style-type: none"> <li>- <b>Topic Specific workshops</b> – Examples - Distributed energy financing workshops, energy outreach by churches and other religious organizations:  Distributed energy planning, financing and development – 2 per year in each high-access-deficit country (7) with 25 to 50 participants in each. 2*7*50*10 years = 7000 participants with capacity to plan, finance and develop decentralized energy systems  Energy outreach by churches – grow to include all faiths – Christian (Catholic, Protestant, Baptist, Pentecostal, 7<sup>th</sup> Day Adventist, Jehova Witness, others), Muslim, and others with an energy mobilization program to engage an increasing number of congregations building resilient communities in rural as well as urban areas. Expect to start with 1 congregation in 2022, 10 in 2023, 100 in 2024 and add 100 every year thereafter through 2030 impacting 611 communities by 2030 with an average of 500 members each – empowering 305,000 with knowledge and skills to develop local energy systems that building jobs and economic value through access to electricity from renewable sources.</li> <li>- <b>Summer schools</b> to provide training to young researchers as well as to build cadres of specialists and experts to accelerate solar energy deployment:  <ul style="list-style-type: none"> <li>– Regional with 50 young researchers in each of 4 SSA regions – building up to 200 students by year 3 (2026) with 200 each year thereafter aspiring to engage at least 1,000 students by 2030 for addressing key topics to advance their energy research skills and to build linkages between research institutions in Africa.</li> </ul> </li> </ul>	

<ul style="list-style-type: none"> <li>- <b>Science camps</b> – Start with one in 2023 and attempt to expand to at least one other country in Africa each year engaging at least 25 countries in Africa by 2030 building towards Africa-wide secondary school science competitions.</li> <li>- <b>African student energy prize(s)</b> – To be awarded during ANSOLE DAYS – The prizes will create opportunities for further education or in the case of ideas for new products for the student to have the opportunity to develop the envisioned product with the support of mentors.</li> <li>- <b>Training programs in cooperation with universities, national agencies and international organizations.</b> Examples – solar energy installation. Thousands of specialists need to be trained. Programs will be developed in topics critical to accelerating renewable energy development. By 2030 50,000 to 100,000 specialists trained to plan, install, monitor, and maintain solar microgrids and similar local energy facilities.</li> </ul>	
<p><b>3.1.5. Ambitions to achieve SDG7 by 2030.</b></p> <p><b>Communications via the -E-ANSOLE portal and establishing the peer-reviewed African Journal of Solar Energy</b></p> <ul style="list-style-type: none"> <li>- Monthly newsletter – reach 1000 year 1, by 2030 expect to reach 50,000. This will link the renewable energy research community with the business community developing energy solutions to meet Africa’s needs.</li> <li>- ANSOLE LinkedIn group – Expect to engage up to 5,000 scientists, entrepreneurs and local and national leaders.</li> </ul> <p>Peer-reviewed African Journal of Solar Energy – Target 01.01.2024 for launch. Build on the extensive archives of presentations and research publications presented at ANSOLE conferences and workshops to prepare topic specific volumes addressing research issues in renewable energy with each edition having an editorial board and editorial standards preparatory to the launch of the African Journal of Solar energy. The African Journal of Solar Energy will encourage the development of research capacity in Africa focused on advancing African solutions to Africa’s energy problems. Expect to publish 20 to 50 papers per annum.</p>	

#### SECTION 4: REQUIRED RESOURCES AND SUPPORT

4.1. Please specify required finance and investments for **each** of the actions in section 2.

Training & mobility:	Sandwich Graduate School - 20 gender balanced PhD-students/year	€2 million (yr1) > €8 million/yr (yr4+)
	Mobility: 3-12 months research stays - 100/year	€1 million/yr
Facilitating R&I collaboration:	online databases and match-making platform of researchers, infrastructure & equipment via ANSOLE’s websites.	€0.5 million/yr
Pan-African networking:	Annual ANSOLE DAYS and other events.	€0.5 million/yr
Exposure:	Establishing the African Journal of Solar Energy	tbc

4.2. [For countries only] In case support is required for the actions in section 2, please select from below and describe the required support and specify for which action.

*[Examples of support for Member States could include: Access to low-cost affordable debt through strategic de-risking instruments, capacity building in data collection; development of integrated energy plans and energy transition pathways; technical assistance, etc.]*

<input type="checkbox"/> Financing	Description
<input type="checkbox"/> In-Kind contribution	Description
<input type="checkbox"/> Technical Support	Description

<input type="checkbox"/> Other/Please specify	Description
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## SECTION 5: IMPACT

5.1. Countries planned for implementation including number of people potentially impacted.

The target is Sub-Saharan African but Northern Africa as well as South Africa will be involved in the Pan-African research and education capacity building initiative.

5.2. Alignment with the 2030 Agenda for Sustainable Development – Please describe how **each** of the actions from section 2 impact advancing the SDGs by 2030.

*[up to 500 words, please upload supporting strategy documents as needed]*

The ANSOLE Energy Compact directly targets SDG 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services. The actions from section 2 contribute to building the capacity for Research & Innovation in Renewable Energy, and to investing in human resources needed for constructing solar and other renewable energy systems and networks, especially in Sub-Saharan African countries. In addition, ANSOLE directly contributes to SDG 4 (quality education for all) and SDG 5 (gender equality). By supporting 60% female students and researchers, ANSOLE contributes to SDG 4.3 (‘ By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university’), to SDG 4.5 (‘ By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations, and to Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life’). By training 20 PhD students in renewable energy per year, ANSOLE contributes to SDG4.4( ‘ By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship’), and to SDG 4.b (‘ By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries’). Indirectly, ANSOLE contributes to other SDGs, most notably to SDG6 (water), SDG2 (food) and SDG14 (reforestation), because access to renewable energy is the key enabler for supplying clean drinking water, and healthy food production. In addition, ANSOLE works with local communities in reforestation combined with introducing solar cookers and renewable energy.

5.3. Alignment with Paris Agreement and net-zero by 2050 - Please describe how **each** of the actions from section 2 align with the Paris Agreement and national NDCs (if applicable) and support the net-zero emissions by 2050.

*[up to 500 words, please upload supporting strategy documents as needed]*

Building capacity for renewable energy in Africa through the actions in section 2 is a key enabler for reducing carbon dioxide emissions needed for achieving the Paris Agreement. The more renewable energy is deployed and capacity is built for renewable energy research, the less there will be a need for coal-fired plants in Africa. Opening new coal-fired plants can be prevented by developing the capacity for renewable energy. ANSOLE is one of the few pan-African networks linking renewable energy research organizations and stakeholders across Africa. This supports building capacity in sub-Saharan Africa and links partners with Northern African universities and stakeholders. This has been done already and with more funding this collaboration can be strengthened.

## SECTION 6: MONITORING AND REPORTING

6.1. Please describe how you intend to track the progress of the proposed outcomes in section 3. Please also describe if you intend to use other existing reporting frameworks to track progress on the proposed outcomes.

The annual ANSOLE anniversary conference is held every 4<sup>th</sup> of February. The progress on the compact will be reported and discussed during these events and the report will be published open access and sent to the United Nations and all stakeholders. The report will cover all facets of the ANSOLE Energy Compact including: the number of PhD-students supported, the number of staff exchanges and mobility, the African Journal of Solar Energy numbers of issues, papers and subscriptions. We will also explain how this ties into the SDGs. This includes technological developments as well as progress in access to modern energy.

## SECTION 7: GUIDING PRINCIPLES CHECKLIST

Please use the checklist below to validate that the proposed Energy Compact is aligned with the guiding principles.

### **I. Stepping up ambition and accelerating action** - Increase contribution of and accelerate the implementation of the SDG7 targets in support of the 2030 Agenda for Sustainable Development for Paris Agreement

*I.1. Does the Energy Compact strengthen and/or add a target, commitment, policy, action related to SDG7 and its linkages to the other SDGs that results in a higher cumulative impact compared to existing frameworks?*

Yes No

*I.2. Does the Energy Compact increase the geographical and/or sectoral coverage of SDG7 related efforts?* Yes No

*I.3. Does the Energy Compact consider inclusion of key priority issues towards achieving SDG7 by 2030 and the net-zero emission goal of the Paris Agreement by 2050 - as defined by latest global analysis and data including the outcome of the Technical Working Groups?* Yes No

### **II. Alignment with the 2030 agenda on Sustainable Development Goals** – Ensure coherence and alignment with SDG implementation plans and strategies by 2030 as well as national development plans and priorities.

*II.1. Has the Energy Compact considered enabling actions of SDG7 to reach the other sustainable development goals by 2030?* Yes No

*II.2. Does the Energy Compact align with national, sectoral, and/or sub-national sustainable development strategies/plans, including SDG implementation plans/roadmaps?* Yes No

*II.3. Has the Energy Compact considered a timeframe in line with the Decade of Action?* Yes No

### **III. Alignment with Paris Agreement and net-zero by 2050** - Ensure coherence and alignment with the Nationally Determined Contributions, long term net zero emission strategies.

*III.1. Has the Energy Compact considered a timeframe in line with the net-zero goal of the Paris Agreement by 2050?* Yes No

*III.2. Has the Energy Compact considered energy-related targets and information in the updated/enhanced NDCs?* Yes No

*III.3. Has the Energy Compact considered alignment with reaching the net-zero emissions goal set by many countries by 2050?* Yes No

### **IV. Leaving no one behind, strengthening inclusion, interlinkages, and synergies** - Enabling the achievement of SDGs and just transition by reflecting interlinkages with other SDGs.

*IV.1. Does the Energy Compact include socio-economic impacts of measures being considered?* Yes No

*IV.2. Does the Energy Compact identify steps towards an inclusive, just energy transition?* Yes No

*IV.3. Does the Energy Compact consider measures that address the needs of the most vulnerable groups (e.g. those impacted the most by energy transitions, lack of energy access)?* Yes No

### **V. Feasibility and Robustness** - Commitments and measures are technically sound, feasible, and verifiable based on a set of objectives with specific performance indicators, baselines, targets and data sources as needed.

*V.1. Is the information included in the Energy Compact based on updated quality data and sectoral assessments, with clear and transparent methodologies related to the proposed measures?* Yes No

*V.2. Has the Energy Compact considered inclusion of a set of SMART (specific, measurable, achievable, resource-based and time based) objectives?* Yes No

*V.3. Has the Energy Compact considered issues related to means of implementation to ensure feasibility of measures proposed (e.g. cost and financing strategy, technical assistant needs and partnerships, policy and regulatory gaps, data and technology)?* Yes No

## SECTION 8: ENERGY COMPACT GENERAL INFORMATION

8.1. Title/name of the Energy Compact

Energy Compact of the African Network for Solar Energy (ANSOLE)

8.2. Lead entity name (for joint Energy Compacts please list all parties and include, in parenthesis, its entity type, using entity type from below)

African Network for Solar Energy e.V. (ANSOLE e.V.), Schillerstrasse 5, 07745 Jena, Germany

8.3. Lead entity type

Government

Local/Regional Government

Multilateral body /Intergovernmental Organization

Non-Governmental Organization (NGO)

Civil Society organization/Youth

Academic Institution /Scientific Community

Private Sector

Philanthropic Organization

Other relevant actor

8.4. Contact Information

Prof. Dr. Daniel Ayuk Mbi Egbe [daniel.egbe@ansole.org](mailto:daniel.egbe@ansole.org), [info@ansole.org](mailto:info@ansole.org)

8.5. Please select the geographical coverage of the Energy Compact

Africa  Asia and Pacific  Europe  Latin America and Caribbean  North America  West Asia  Global

8.6. Please select the Energy Compact thematic focus area(s)

Energy Access  Energy Transition  Enabling SDGs through inclusive just Energy Transitions  Innovation, Technology and Data  Finance and Investment.

## SECTION 9: ADDITIONAL INFORMATION (IF REQUIRED)

Please provide additional website link(s) on your Energy Compact, which may contain relevant key documents, photos, short video clips

Websites of ANSOLE: <https://ansole.org/>, <https://ansole.com/>

Videos of ANSOLE: [https://diode.zone/c/ansole\\_videos](https://diode.zone/c/ansole_videos)

Website of BALEWARE: <https://baleware.org/>

Report of 10<sup>th</sup> anniversary conference of ANSOLE: <https://ansole.org/download/Event%20Book%20ANSOLE%20DAYS%202021%20final2.pdf>

Report of 11<sup>th</sup> anniversary conference of ANSOLE: [https://ansole.org/download/A2IOC%202022%20event%20document\\_final-min.pdf](https://ansole.org/download/A2IOC%202022%20event%20document_final-min.pdf)

ANSOLE E-magazine 6 (2020): <https://ansole.org/download/ANSOLE%20e-Magazine%206,%202020%20F.pdf>