

African Strategy for Fundamental and Applied Physics

Pan-African, gender balanced and inclusive

Town Hall Meeting : 2021-07-12

Mandating Body : African Physical Society

Steering Committee: ASFAP-SteeringCommittee@cern.ch

- **Dr. Kétévi Adiklè Assamagan** (BNL, USA), ketevi@bnl.gov
- **Prof. Simon Connell** (University of Johannesburg, SA), si@mykonos.org.za
- **Prof. Farida Fassi** (Mohammed V University, Morocco), farida.fassi@cern.ch
- **Prof. Shaaban Khalil** (CFP, Zewail City, Egypt), skhalil@zewailcity.edu.eg
- **Dr. Fairouz Malek** (CNRS and Grenoble Univ., France), fmalek@lpsc.in2p3.fr



Web : <https://africanphysicsstrategy.org/>,
Wiki : <https://twiki.cern.ch/twiki/bin/view/AfricanStrategy>
Twitter: <https://twitter.com/StrategyAsfap>

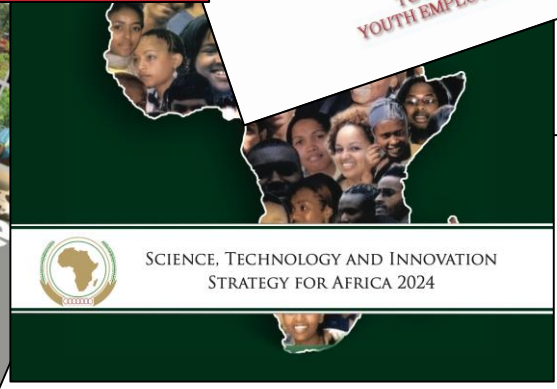
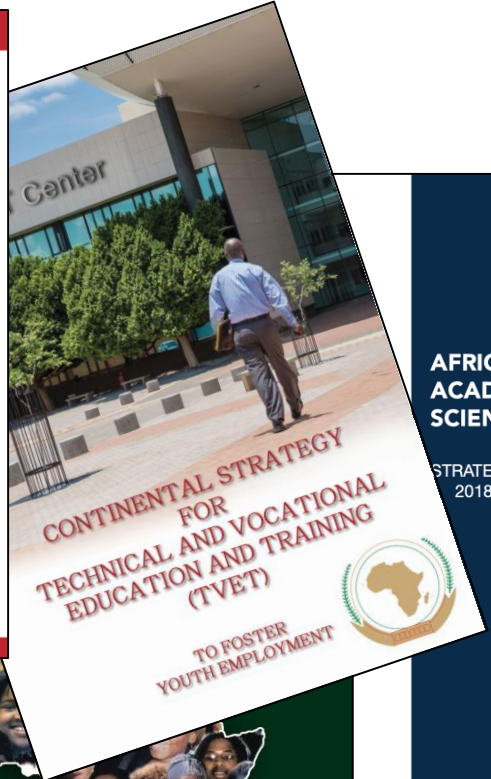
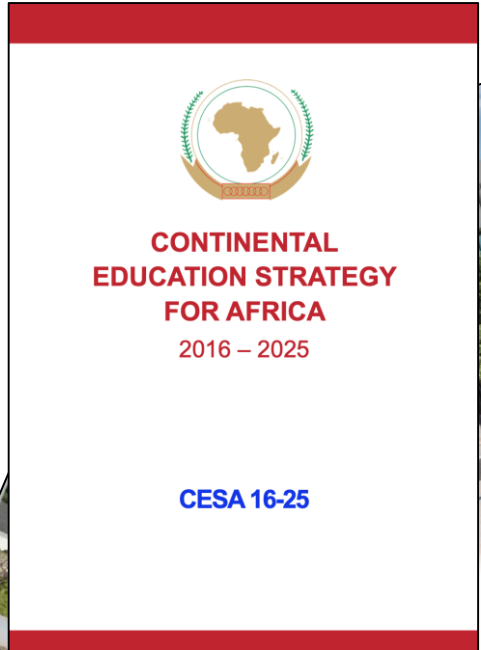
Outline

- The African Strategy
 - Motivation, steering committee, time scale, expectation, general structure of the organization
- Structural Organization
- Members of the IAC
- Groups and subgroups
- Timeline
- Endorsement and Support
- How can you get involved?

Background to Strategies

- **Strategies - Origin**
 - Authored by Policy Makers
 - Experts
 - **Community (ASFAP)**

- **Strategies - Fields**
 - Focused
 - Grand Challenge
 - **Broad (Physics)**



Best Practice Internationally for Community driven strategies

Examples (some)

1. European Strategy for Particle Physics

- a. 3rd Iteration. 2006, 2013, 2020, 2013
- b. Mandated by the CERN Council
- c. Actively solicits the opinions globally

2. US Strategy for Particle Physics

- a. 2nd iteration. 2013, current Snowmass2021 process
- b. Mandated by American Physical Society, Division of Particles and Fields (DPF) - Snowmass 2021.
- c. Encapsulate the scientific vision for the future of particle physics in the U.S. including its international partners
- d. The Particle Physics Project Prioritization Panel, develops the strategic plan from SnowMass 2021
- e. 10 year timescale, in the context of a 20-year global vision for the field.

3. Latin America Strategy Forum for Ris for High Energy Physics, Cosmology and Astroparticles

- a. First time in Latin American.
- b. Mandated by Ibero-American Ministerial Science and Technology. Meeting in Guatemala in October 2018:mandate declaration

4. More on the strategies for Japan, India, China, EU, USA, Latin America Strategies in this session

- a. See talks in this and the next session.

Guided by international examples and participation in similar processes.

What is the process for Africa ?

ASFAP – Advancing Africa

Vision : Advancing Africa

Process : Ubuntu and Indaba

Enormous effort for the broadest participation

Who is African ?

1. Someone born in Africa
2. African Ancestry
3. African Diaspora

..... and

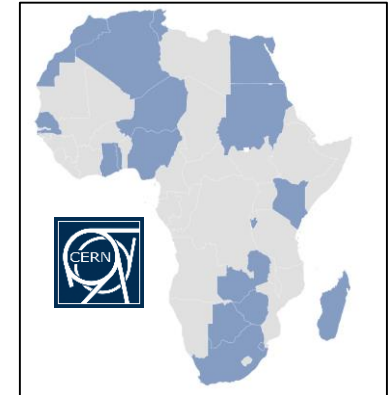
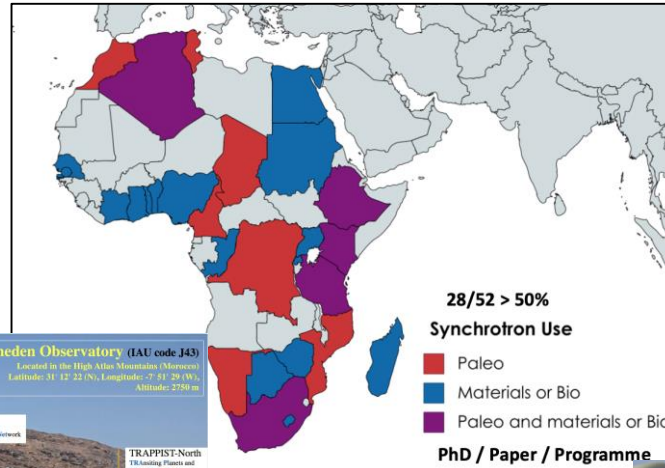
4. **To be an African,
you do not need to be born in Africa,
..... Africa must be born in you**



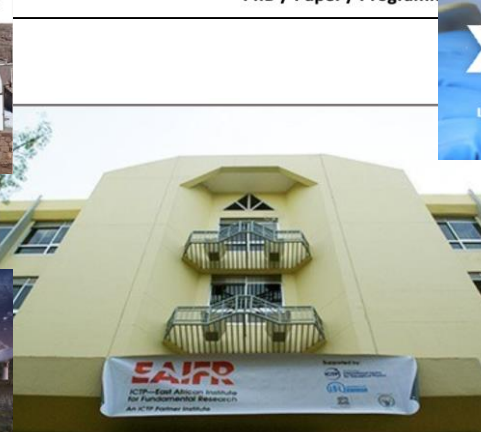
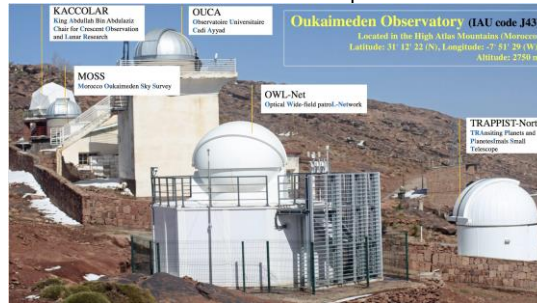
Arikana Chihombori-Quao
AU representative to USA 2017-2019



ASFAP – Advancing Africa, some national, regional centres and use of global RIs



SAO
SALT
Boyden
Hartebeesthoek
Hermanus
HESS



The African Strategy

1. Objectives

- a. Develop a Strategy to increase African education and research capabilities, improve collaborations, and inform international partners, sponsors, policymakers on the strategic directions likely to impact African development
- b. Engage African scientists and the international community in the Strategy development
- c. The process to take a few years, to end with the release of the strategy report which will suggest the direction, with actionable items for the next decade. To be repeated periodically, every 7-10 years for the following decades with a review of the impact of previous Strategies
- d. This inaugural African Strategy to set the foundation and framework to draw the participation of African physicists —with inputs from the international communities—in defining education and physics priorities most impactful for Africa

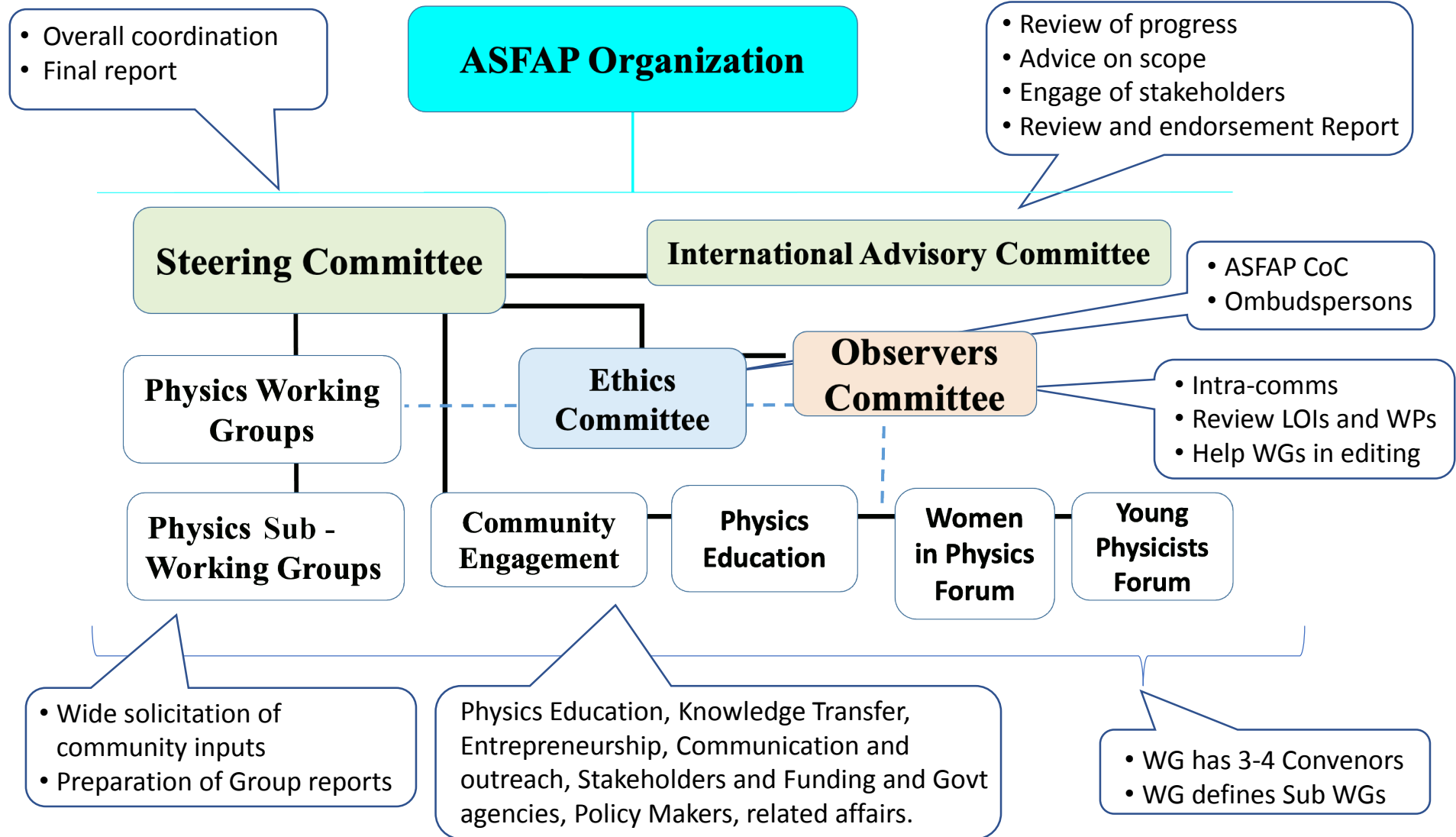
2. General Structure

- a. Broad footprint by discipline and fields
- b. Steering Committee, Advisory Committee, Group Conveners, Sub-group Conveners
- c. Solicitation of inputs from the community in the form of Letters of Intent, and White Paper Study Groups
 - i. Progress discussed in the relevant groups
 - ii. Subgroup and group final reports (at the subgroup and convener levels); Strategy report at the Steering Committee level
 - iii. Feedback and advice from the IAC

3. Logistics – Post COVID Virtual Working enabled by electronic technology platforms

- a. Website, Twiki pages for working groups, Cloud repository, multi-group mailing lists, discussion forums, Indico meeting Agendas and virtual workshops — **continuous development**

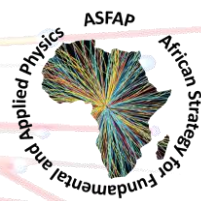
Structure and Organization



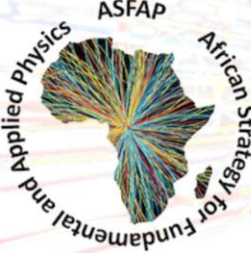
International Advisory Committee

- Prof. Ahmadou Wagué** (President [AfPS](#))
- Prof. Atish Dabholkar** (Director of ICTP)
- Prof. Azwinndini Muronga** (Dean of Science, NMMU, SA)
- Prof. Emmanuel Tsemelis** (CERN IR)
- Prof. Faiçal Azaiez** (Director of iThemba LABS, SA)
- Dr. Fadila Boughanemi** (EU Deputy Head of Int Cooperation, R&I Unit)
- Prof. Omar Fassi-Fehri** (The perpetual secretary of Hassan II Academy of S&T, Morocco)
- Prof. Fernando Quevedo** (Former Director of ICTP)
- Prof. James S. Gates** (Brown University, President of APS)
- Dr. Latifa Elouadrhiri** (Physicist Jefferson Lab & DOE, USA)
- Prof. Michel Spiro** (President of IUPAP)
- Prof. Mohamed Hassan** (President of TWAS)
- Dr. Najat Mokhtar** (IAEA DDG, HoD of Nucl Sciences & App)
- Prof. M. Norbert Hounkonnou** (President, NASAC)
- Prof. Petra Rudolf** (U Groningen, President of EPS)
- Prof. Raheel Qamar** (Head S&T Sector, ICESCO)
- Dr. Raïssa Malu** (mem. DRC Presidential Panel to the AU)
- Rob Adam** (Director of SKA, South Africa)
- Prof. Rohini Godbole** (India Institute of Science)
- Prof. Rolf Heuer** (President of the SESAME Council)
- Prof. Setsuko Tajima** (President of the JPS, Osaka U., Japan)
- Prof. Wang Yifang** (Director at IHEP/CAS, China)
- Prof. Winston Soboyejo** (Former President of AUST, Nigeria, Provost Worcester Polytech, USA)
- Dr. Shamila Nair-Bedouelle** (UNESCO Assistant DG for Natural Sciences)
- Dr. Takalani Nemaungani** (DSI, Acting Chief Director of Astronomy, SA)
- Prof. Young-Kee Kim** (Louis Block Distinguished Service Professor of Physics Chair, U of Chicago, USA)
- Prof. Zebulon Vilakazi** (Vice Chancellor, U Witwatersrand, SA).

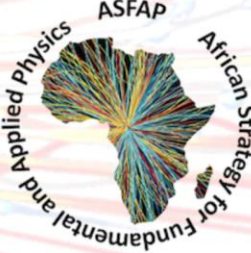




ASFAP Web WG Docs



African Strategy for Fundamental and Applied Physics



[MISSION](#) [ORGANIZATION](#) [TIMELINE](#) [SUPPORT](#) [TWIKI SITE](#) [WG DOCUMENTS](#) [NEWS](#) [PUBLICATIONS](#)

Twiki

Twiki Page

DOCUMENTS

Founding Document
Strategy Report

SUPPORTS

Endorsement
Financial & In-kind


ORGANIZATION

Steering Committee
Advisory Committee
Group Conveners


PHYSICS GROUPS

Accelerators
Astrophysics & Cosmology
Atomic & Molecular Physics
Biophysics
Computing & 4IR
Earth Science
Energy
Fluid and Plasma
Instrumentation & Detectors

WG DOCUMENTS





[ASFAP Working Group Guidelines](#)



[ASFAP Working group Code of Conduct](#)

FOLLOW US ON SOCIAL MEDIA

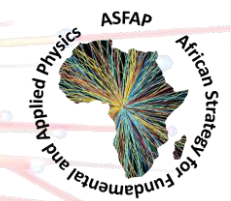
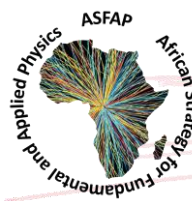


LINKS

- [1. African Physics Society](#)
- [2. African Academy of Sciences](#)
- [3. The Network of African Science Academies \(NASAC\)](#)

RECENT POSTS: AFRICA PHYSICS STRATEGY

[ASFAP interviewed on rfi](#)
[African Workshop on Computing and Fourth Industrial Revolution](#)
[ASFAP Community Town Hall, July 12-15, 2021](#)



ASFAP Twiki structure, activity

twiki.cern.ch/twiki/bin/view/AfricanStrategy/WebHome

SimonHConnell | Log Out | AfricanStrategy

WebHome (2021-04-23, GopolangMohlabengExternal)

Edit Attach PDF

- DOCUMENTS**
- Founding Document
- Strategy Report
- WG Guidelines
- SUPPORTS**
- Endorsement
- Financial & In-kind
- ORGANIZATION**
- Steering Committee
- Advisory Committee
- Group Conveners
- PHYSICS GROUPS**
- Accelerators
- Astrophysics & Cosmology
- Atomic & Molecular Physics
- Biophysics
- Computing & 4IR
- Earth Science
- Energy
- Fluid and Plasma
- Instrumentation & Detectors
- Light Sources
- Materials Physics
- Medical Physics
- Nuclear Physics
- Particle Physics
- Optics and Photonics
- Theoretical & Applied Mechanics
- ENGAGEMENT**
- Community Engagement
- Observers Committee
- Ethics Committee
- Physics Education
- Women in Physics Forum
- Young Physicists Forum



AFRICAN STRATEGY FOR FUNDAMENTAL AND APPLIED PHYSICS (ASFAP)

Scientific and technological achievements have become commonplace. As remarkable as these achievements are for other regions of the world, enormous challenges and opportunities remain to be addressed in Africa. Although vital for development, Africa's science, innovation, education and research infrastructure, particularly in fields such as Fundamental and Applied Physics, has been over the years under-valued and under-resourced. The vision is that Africa should take its equal place as a co-leader in the global scientific process, along with all the social-economic benefits thereto. The necessity of initiating ASFAP has become essential for Africa, hence our ambition and motivation to jump-start this process.

[The ASFAP website](#)

Introduction

[ASFAP ambition and challenges](#)

Events

1. The Steering Committee of the African Strategy has **launched** ASFAP on November 18, 2020, during an [online workshop organized jointly by AfPS and AfLS](#).
2. ASFAP was presented at the 107th meeting of the European Committee for Future Accelerators (**ECFA**) on November 20th, 2020. [Slides](#).
3. An introduction of the ASFAP strategy project was presented on December 8th, 2020 at the 12th General assembly of the [African Academy of Sciences](#) (AAS).
4. ASFAP is on page 25 of the [ECFA Newsletter #6](#).

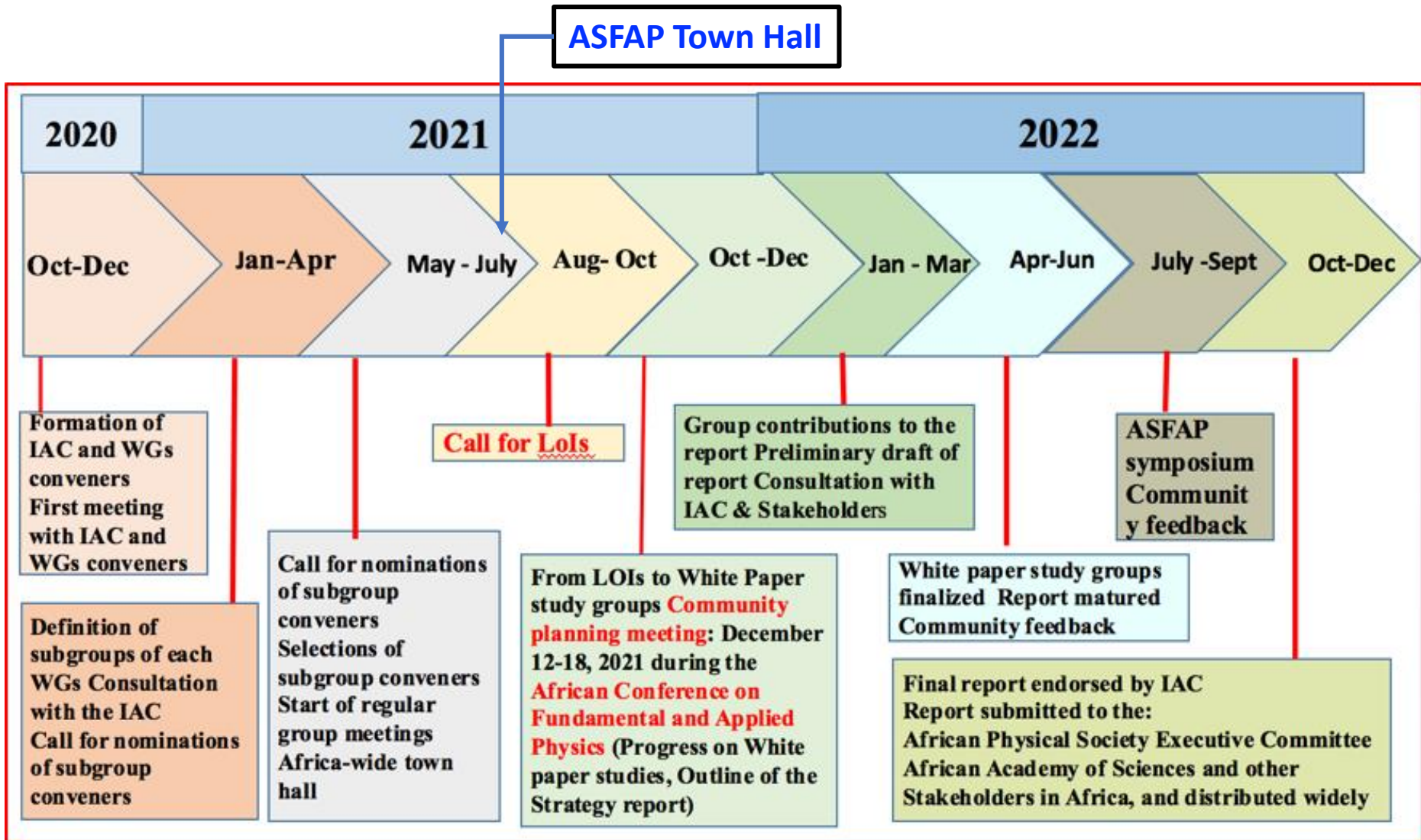
Attachments

!	Attachment	History	Action	Size	Date	Who	Comment
	Proposal-ASFAP.docx.pdf	r1	manage	168.1 K	2020-10-16 - 14:21	FairouzMalek	ASFAP version date October 15th, 2020
	Proposal-ASFAP_cover.png	r1	manage	116.5 K	2020-10-16 - 14:47	FairouzMalek	

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Topic revision: r30 - 2021-04-23 - [GopolangMohlabengExternal](#)

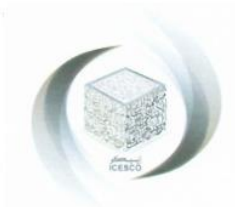
ASFAP Timeline



Support for ASFAP



- General mandate
- Close interaction
- Final Report Endorsement



ICTP - East African Institute for Fundamental Research under the auspices of UNESCO



NNV



How can you get involved

1. Nominate subgroup conveners and liaisons
2. Volunteer for (sub)conveners
3. Submit LOIs / White papers
4. Participate in White Paper study groups
5. Participate in (sub)group meetings
 - a) Offer your constructive opinions and expertise
6. Encourage your research groups to get involved
7. Encourage institutional credits for those working on this Strategy
 - a) For people in leadership roles as (sub)conveners and liaisons
 - b) White papers aim to be published
 - c) White paper finding reviewed and referenced in the Strategy report



Thuma mina – Send Me

<https://www.youtube.com/watch?v=d48Bwux-btq0>

Musician Hugh Masekela

Inspired SA President Cyril Ramaphosa

