Report of Team D

Focus Area 11
Insufficient number of qualified personnel

Focus Area 11 – Operators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11a-1 - Stakeholders, collectively and individually, assess human resources requirements for the recruitment and training of personnel that includes growth projections, target levels and training standards. a. The assessment projects the needs,	a. Assessment	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion:
expected shortfalls and required training based on: Sound market-based assessment of operational projections across all operators; Expected development of flight operations and related support requirements for all sectors of the industry; Anticipated retirements and replacements.	exists for all industry sectors	Helicopter operators have HR plan No systematic plan Aviation College retirement assessment of pilot needs done. Gap in the area of instructors identified for college. No database to manage situation

BP 11a-1Stakeholders, collectively and individually, assess human resources requirements for the recruitment and training of personnel that includes growth projections, target levels and training standards. a. The assessment projects the needs, expected shortfalls and required training based on: • Sound market-based assessment of operational projections across all operators; • Expected development of flight operations and related support requirements for all sectors of the industry; • Anticipated retirements and replacements. Complete X Somewhat Little/None Not Applicable Discussion: Infrastructure plans not mexists for all industry sectors Analysis of attrition and growth completed for ATC but not engineers NA for small ANSPs Government policy affects recruitment and training of personnel (budget limits) No system to stimulate interest in young recruits

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Focus Area 11 – Regulators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11a-1 - Stakeholders, collectively and individually, assess human resources requirements for the recruitment and training of personnel that includes growth projections, target levels and training standards. a. The assessment projects the needs, expected shortfalls and required training based on: • Sound market-based assessment of operational projections across all operators; • Expected development of flight operations and related support requirements for all sectors of the industry; • Anticipated retirements and replacements.	a. Assessment exists for all industry sectors	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion: NA for small states Plans exist but limitation on implementation Extrapolation based on past growth not necessarily on market COSCAP has annual training plan

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Best Practices	Metrics	Implementation
BP 11a-1 _Stakeholders, collectively and individually, assess human resources requirements for the recruitment and training of personnel that includes growth projections, target levels and training standards. a. The assessment projects the needs, expected shortfalls and required training based on: • Sound market-based assessment of operational projections across all operators; • Expected development of flight operations and related support requirements for all sectors of the industry; • Anticipated retirements and replacements.	a. Assessment exists for all industry sectors	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion: Security requirements identified by audits More planning required Plans are not always implemented. (delays in release of funds) Plans reflect infrastructure

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Focus Area 11 – Operators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11b-1 – Stakeholders identify potential sources of appropriately qualified personnel and actively encourage a sufficient number of people to enter accredited training institutions. a. Promotion of the acceptance of licenses and qualifications issued by other regulatory authorities/civil aviation authorities. b. Development of incentives to attract potential candidates into the industry. c. Development of incentives to reduce the migration of professional staff from one region to another.	Source of qualified personnel identified, along with a recruitment strategy.	☐ Complete Somewhat X Little/None ☐ Not Applicable Discussion: Nigerian government scholarship program through college (limited) Licenses recognized Operators recruiting and paying for training Nigerian content policy working but limited to Nigeria Difficulty in recruiting for helicopters operators

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BP 11b-1 - Stakeholders identify potential sources of appropriately qualified personnel and actively encourage a sufficient number of people to enter accredited training institutions. a. Promotion of the acceptance of licenses and qualifications issued by other regulatory authorities/civil aviation authorities. b. Development of incentives to attract
potential candidates into the industry. c. Development of incentives to reduce the migration of professional staff from one region to another.

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Focus Area 11 – Regulators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11b-1 – Stakeholders identify potential sources of appropriately qualified personnel and actively encourage a sufficient number of people to enter accredited training institutions. a. Promotion of the acceptance of licenses and qualifications issued by other regulatory authorities/civil aviation authorities. b. Development of incentives to attract potential candidates into the industry. c. Development of incentives to reduce the migration of professional staff from one region to another.	Source of qualified personnel identified, along with a recruitment strategy.	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion: Licenses of other States accepted Incentives exist to recruit Limited resources to retain

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Best Practices	Metrics	Implementation
BP 11b-1 - Stakeholders identify potential sources of appropriately qualified personnel and actively encourage a sufficient number of people to enter accredited training institutions. a. Promotion of the acceptance of licenses and qualifications issued by other regulatory authorities/civil aviation authorities. b. Development of incentives to attract potential candidates into the industry. c. Development of incentives to reduce the migration of professional staff from one region to another.	Source of qualified personnel identified, along with a recruitment strategy.	☐ Complete ☐ Somewhat X Little/None ☐ Not Applicable Discussion: a. NA No recruitment incentive plan but no lack of applicants

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Focus Area 11 – Operators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11b-2 – Organizations develop and implement a rolling multi-year human resources plan that is regularly reviewed and updated. a. A flexible human resource plan is implemented as an integral part of the organization's business plan. b. The plan provides a basis upon which to make adjustments to reflect unanticipated changes in the industry and includes specific strategies for the retention of qualified staff.	a. Number of qualified personnel to meet the plan.	☐ Complete ☐ Somewhat X Little/None ☐ Not Applicable Discussion: Reactive recruiting (poaching typical Shortfalls of personnel exist Airline input required

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Focus Area 11 – Regulators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11b-2 – Organizations develop and implement a rolling multi-year human resources plan that is regularly reviewed and updated. a. A flexible human resource plan is implemented as an integral part of the organization's business plan. b. The plan provides a basis upon which to make adjustments to reflect unanticipated changes in the industry and includes specific strategies for the retention of qualified staff.	a. Number of qualified personnel to meet the plan.	☐ Complete X Somewhat X Little/None ☐ Not Applicable Discussion: Plan exists but is based more on funds available than needs Need more information from other States.

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Focus Area 11 – ANSPs Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11b-2 – Organizations develop and implement a rolling multi-year human resources plan that is regularly reviewed and updated. a. A flexible human resource plan is implemented as an integral part of the organization's business plan. b. The plan provides a basis upon which to make adjustments to reflect unanticipated changes in the industry and includes specific strategies for the retention of qualified staff.	a. Number of qualified personnel to meet the plan.	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion: Shortage of technical personnel across disciplines Budget constraints limit implementation Only Cape Verde has direct collection and use of AN charges

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Best Practices	Metrics	Implementation
BP 11b-2 – Organizations develop and implement a rolling multi-year human resources plan that is regularly reviewed and updated. a. A flexible human resource plan is implemented as an integral part of the organization's business plan. b. The plan provides a basis upon which to make adjustments to reflect unanticipated changes in the industry and includes specific strategies for the retention of qualified staff.	a. Number of qualified personnel to meet the plan.	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion: No competition for resources Adequate people recruited and retained

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Focus Area 11 – Operators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11c-1 Stakeholders establish internal and independent audit processes and reviews. a. Internal audits are conducted as an integral part of the organization's business plan review. b. External independent auditing is conducted through the use of recognized and accepted audit processes such as USOAP and IOSA.	a. The audit process is integral to the organization's business plan.	☐ Complete X Somewhat - ☐ Little/None ☐ Not Applicable Discussion: Audits of personnel plans part of internal quality system Completed as part of IOSA or code share audits Internal audits are done, may not include personnel.

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Focus Area 11 – Regulators Best Practice Implementation

Best Practices	Metrics	Implementation
BP 11c-1 – Stakeholders establish internal and independent audit processes and reviews. a. Internal audits are conducted as an integral part of the organization's business plan review. b. External independent auditing is conducted through the use of recognized and accepted audit processes such as USOAP and IOSA.	a. The audit process is integral to the organization's business plan.	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion: Regulators submit to ICAO audits Quality processes associated with SMS will improve implementation Internal audits not common today

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Focus Area 11 – ANSPs Best Practice Implementation

Best Practices	Metrics	Implementation
Best Practices BP 11c-1 Stakeholders establish internal and independent audit processes and reviews. a. Internal audits are conducted as an integral part of the organization's business plan review. b. External independent auditing is conducted through the use of recognized and accepted audit processes such as USOAP and IOSA.	a. The audit process is integral to the organization's business plan.	Implementation □ Complete X Somewhat □ Little/None □ Not Applicable Discussion: ANSPs are required in Nigeria to use quality control processes Audited by regulator No external internationally accepted audit organization for ANSPs

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Best Practices	Metrics	Implementation
BP 11c-1 — Stakeholders establish internal and independent audit processes and reviews. a. Internal audits are conducted as an integral part of the organization's business plan review. b. External independent auditing is conducted through the use of recognized and accepted audit processes such as USOAP and IOSA.	a. The audit process is integral to the organization's business plan.	□ Complete X Somewhat X Little/None □ Not Applicable Discussion: Audited by regulator Internal audits not implemented in all areas ARFF is an exception. FAAN evaluates personnel. NCAA certifies ARFF personnel Internal auditors are not certified

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Focus Area 11 – Other Best Practices (1)

Best Practices	Meti	ics	Implementation
O Planned use of retired personnel, as supplemental	a.	Use of Retirees	☐ Complete
workforce, mentors, and		included in plans	X Somewhat
instructors where applicable			☐ Little/None
			☐ Not Applicable
			Discussion:
			In place in Nigeria for Regulator
			In place for ANSPs and College
			In place in operators – airlines recruiting retired personnel including Air Force
			Retirees must be trained and current as required by job function
			Need to know more about other States

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Focus Area 11 – Other Best Practices (2)

Best Practices	Met	rics	Implementation
O Career Development includes secondment between Agencies and between States	a.	Included in plans. All disciplines. Across States	☐ Complete X Somewhat ☐ Little/None ☐ Not Applicable Discussion: Database is being developed within BAG for secondement of inspectors
			Database in Nigeria for resources persons for the College
			Practiced among government agencies
			Operators provide instructors
			Mostly ad hoc not between States yet

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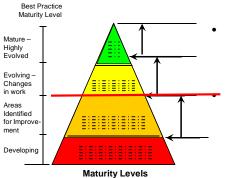
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Focus Area 11 – Other Best Practices (3)

Best Practices	Met	rics	Implementation
	a.	Defined	
O In-house mentoring program		program in place in all	☐ Complete
		sectors	X Somewhat
			☐ Little/None
			☐ Not Applicable
			Discussion:
			Operators TBD
			Regulators serve as instructors for operators in SMS
			Mentoring present in ANSPs
			Rotation program part of training in Airports

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Operators Identify Potential Recommended Actions



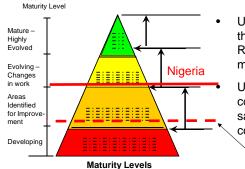
Using the identified maturity level and the identified gaps, list the Recommended Actions necessary to move to the next level of maturity

Using the group knowledge and consensus, identify other potential safety actions that should be considered.

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Regulators Identify Potential Recommended Actions



Using the identified maturity level and the identified gaps, list the Recommended Actions necessary to move to the next level of maturity

Using the group knowledge and consensus, identify other potential safety actions that should be considered.

BAG States

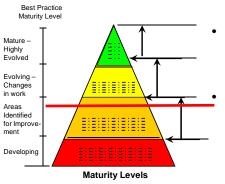
Note:

Best Practice

- Level should be verified by all BAG States.
- NCAA has improved substantially in last 2 years but are still budget constrained.
- Cape Verde and Ghana have improved substantially and achieved Cat 1.
- Some BAG States have significant shortfall.

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ANSPs Identify Potential Recommended Actions



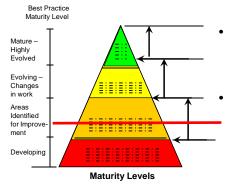
Using the identified maturity level and the identified gaps, list the Recommended Actions necessary to move to the next level of maturity

Using the group knowledge and consensus, identify other potential safety actions that should be considered.

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Airports Identify Potential Recommended Actions



Using the identified maturity level and the identified gaps, list the Recommended Actions necessary to move to the next level of maturity

Using the group knowledge and consensus, identify other potential safety actions that should be considered.

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Identify Potential Recommended Actions

Recommended Actions

- Develop data base reflecting manpower and training needs for the sub-region building on existing data and projections.
- Develop a plan for the sub-region that will retain industry personnel and provide instructors for training institutions
- Develop programs where donor organizations and governments can subsidize aviation industry training (consider Industrial Training Fund and scholarships).
- Establish internship programs across government and industry to attract new personnel and motivate and retain existing personnel.
- Develop exchange programs between sub-region and advanced aviation countries.
- Work with operators to develop valid long term human resource plans that match resources to proposed operations. (Should address development and recruitment of young personnel,

and aviation qualifications of senior management)

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Identify Potential Recommended Actions

Recommended Actions

- The safety team should review policies that impact entry qualifications and career progression for safety-related professions.
 - · Address use of vocational training in lieu of degrees.
 - Address aviation qualifications of management and safety personnel.
- Keep training plans and infrastructure plans synchronized.
 All program plans should include training and staffing plans.
- Safety team should identify appropriate level of training investment required to support safety along with source of funds. (note: best practice is at least 5% of personnel cost). Governments should be encouraged to identify and protect this portion of the budget. Direct use of charges should be considered.
- Develop training infrastructure (for airports, ANSPs, etc) and share these resources across the BAG States

iation sTreamushould develop incentives for retention of government

inenectors and identify compensation dens