Language Proficiency Implementation Plan Workshop

Dubai, UAE, 28 to 31 January 2008

WORKSHOP MATERIALS

Language Proficiency Implementation Plan Workshop
Dubai, UAE, 28 to 31 January 2008

Workshop Schedule

	Monday 28 January	Tuesday 29 January	Wednesday 30 January	Thursday 31 January
AM	Module 1

Background Information | Module 3

Estimate of level of implementation | Module 5 - Interim Measures | Module 6 - Notifying a difference with ICAO |
| **PM** | Module 2

Regulatory Framework | Module 4

Training and Assessment | Module 5 – Continued | Closing |

**Language Proficiency
Implementation Plan Workshop
(Dubai, UAE, 28 to 31 January 2008)**

Flight Safety Section – ICAO

1

Workshop Objective

**Using the ICAO guidelines,
participants will develop a draft
implementation plan for their
organization to achieve
compliance by 5 March 2011.**

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To develop this plan participants will…

- Outline the content of their State's regulatory framework

- When possible provide an estimate of the national/organizational level of implementation; when not possible, identify the source of information and establish a plan to obtain the information

- Roughly describe language training and assessment programmes

- Identify potential hazards and risks that may arise from non-compliance with a view to introducing mitigating measures

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3

Implementation Plans

… **use the forms that are in the workbook.**

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And…

… **participants will present their draft implementation plans to the group.**

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Schedule

	Monday 28 Jan	Tuesday 29 Jan	Wednesday 30 Jan	Thursday 31 Jan
AM	Module 1 Background Information	Module 3 Estimate of level of implementation	Module 5 - Interim Measures	Module 6 - Notifying a difference with ICAO
PM	Module 2 Regulatory Framework	Module 4 Training and Assessment	Module 5 – Continued	Closing

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QUESTIONS?

Module 1
Language Proficiency Requirements – Update

Language Proficiency
Implementation Plan Workshop
(Dubai, UAE, 28 to 31 January 2008)

1

The Case for LPRs

Accidents	Fatalities
Trident/DC-9 mid-air collision, Zagreb -1976	175
Double B747 runway collision, Tenerife – 1977	583
B707 fuel exhaustion, JFK - 1990	73
B757 CFIT, Cali – 1995	160
IL-76/B747 mid-air collision, India – 1996	349
MD83/Shorts 330 runway collision, Paris/CDG - 2000	1
MD80/Citation runway collision, Milan – 2001	118

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LPR Chronology

1998:	A32-16
2000-2001:	PRICE SG
2001-2003:	Review and Expand (A33)
March 2003:	Adopted
July 2003:	Effective
June 2006:	Mid-point review
April 2007:	Second survey review
October 2007:	36th Assembly
March 2008:	Applicable

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A32-16

"…steps to ensure that air traffic controllers and flight crews involved in flight operations in airspace where the use of the English language is required, are proficient in conducting and comprehending radiotelephony communications in the English language"

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PRICESG

➢**Review all aspects of air-ground and ground-ground voice communication**

➢**Develop requirements concerning English language testing**

➢**Develop language proficiency requirements**

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Annex 10 – Volume II

Language(s) to be used

➢ **Para 5.2.1.2.1: The air-ground radiotelephony communications <u>shall</u> be conducted in the language normally used by the station on the ground or in the English language**

➢ **Para 5.2.1.2.2 The English language <u>shall</u> be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes used by international air services**

➢ **Amendment 78 deleted provisions related to interpreters for radiotelephony communications**
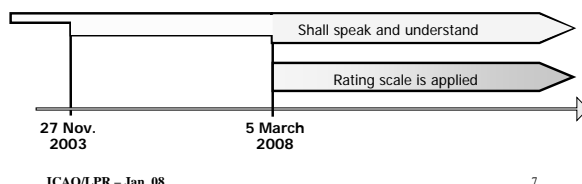
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Annex 1 - General Principles

Limited to radiotelephony communication
The "Speak and Understand" Standard
Cover all languages used in radio communication
Assessment using a rating scale (level 4)
Progressive implementation

Shall speak and understand

Rating scale is applied

27 Nov.
2003

5 March
2008

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▪**Aeroplane & helicopter pilots (PPL, CPL and ATPL)**
▪**Air traffic controllers and aeronautical station operators**

Shall demonstrate the ability to speak and understand the language used for radiotelephony communications (Standard 1.2.9.1)

After 5 March 2008,

➢ The "speak and understand" ability shall be demonstrated to level 4 of the ICAO rating scale (Standard 1.2.9.4 and Appendix)

➢ "Formal evaluation" will be required for those below level 6 (recommendation: every 3 years for level 4 and every 6 years for level 5)

Previous Standard on the use of radiotelephony procedures and phraseology still applies

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Other Annexes

➢ **Annex 6:   (Parts I and III) Role of operators**

➢ **Annex 11:   Role of Air traffic service providers**

  ➢ **ATCOs speak and understand in accordance with Annex 1**

  ➢ **English used between air traffic control units except when another language is mutually agreed**

➢ **PANS-ATM: ATS and other ground personnel will be expected to use plain language to the level specified in the ICAO language proficiency requirements contained in Annex 1**

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ICAO Deliberations - June 2006

- **Survey conducted through ICAO Regional Offices – November 2005**

- **Responses from 36 States and 2 International Organizations**

- **E1 = 10 of 36 responses…inconclusive data**

- **Insufficient justification to change applicability date**

- **ANC Ad Hoc Working Group formed – focus on implementation**

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ICAO Deliberations - April 2007

•**Survey – October 2006**

•**59 States responded**

•**Amend A32-16**

	No. of States who have replied indicating:		
	Full implementation	Partial implementation	N/A
Will all pilots with air transport pilot's licence (ATPL) and commercial pilot's licence (CPL) be at least at Level 4?	48	18	
Will air traffic controllers be at least at Level 4?	41	21	
Will aeronautical station operators be at least at Level 4?	22	5	30
Will pilots with private pilot's licence (PPL) be at least at Level 4?	42	12	

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Implementation Support Activities

- **Manual on the Implementation of ICAO LPRs**
- **Rated Speech Samples**
- **11 Regional Seminars**
- **PRICE SG/05 – April 06**
- **ICAO Aviation Language Symposia (2004 and 2007)**
- **Implementation Planning Workshops in all ICAO Regions by February 08**
- **Amended 9835 – First Quarter 08**

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Non-compliance:

Article 33 (Recognition)

➢ **Gives multilateral recognition of States' exportables (licenses and airworthiness certificates) provided that the requirements under which they were issued, or rendered valid, are equal to or above the minimum Standards (i.e. Annex 1 and 8)**

➢ **Non-compliance with the LPRs can invalidate recognition**

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Non-Compliance

Article 38 (Departures from international standards and procedures):

➢ Notify Council within 30 days of applicability date

➢ Council immediately notifies all other States

Update Aeronautical Information Packages (AIPs)

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Non-compliance

Article 39 (Endorsement of certificates and licenses):

➢ Licenses shall be endorsed <u>when not</u> meeting an international Standard

Annex 1, Chapter 5, gives the specific endorsement requirements for LPRs

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Non-compliance

Article 40 (Validity of endorsed certificates and licenses)

➢ No pilot with an "endorsed" license shall participate in international navigation, except with the permission of the State or States whose territory is entered

➢ i.e. multiple bilaterals to fly internationally

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English applies to all international operations?

- **Short answer…NO**

- **For instance: Russian language proficiency for operations when operating in areas in which ATS are provided in Russian**

- **Article 40 permission is not required in this example when operating in areas in which ATS is available in Russian**

- **Lack of compliance with English language proficiency requirements will limit operational area**

- **Air navigation services will still need to provide English language for international operations**

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Example 1

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Example 1

- Pilots operational Level 4 in Russian?

- Yes...endorse license under Annex 1

- Does not constitute an Article 39 Endorsement

- No requirement for permission of the States that provide Russian language ATS

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Question?

In the previous example, an aircraft from Belarus is flying to Turkmenistan. Would English language air traffic services need to be available to that flight?

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Answer

"English language shall be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes used by international air services." (Annex 10)

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Example 2

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Example 2:

- **Pilots operational level 4 in Russian?**
- **Yes...endorse license under Annex 1**
- **Pilots operational level 4 in English?**
- **Yes...endorse license under Annex 1**
- **No requirement for permission of the States that provide Russian and/or English language ATS (i.e. Article 40)**

  (English language shall be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes used by international air services)

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Question?

Give another example of an operation that would require more than one language that meets the ICAO language proficiency requirements?

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Example 3

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Example 3:

- **Pilots operational level 4 in Russian?**
- **Yes...endorse license under Annex 1**
- **Pilots operational level 4 in English?**
- **No...endorse license - Article 39**
- **Permission of all States that do not provide Russian language ATS (i.e. Article 40)**

(English language shall be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes used by international air services)

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Example 3's Consequences

- **Numerous bilaterals or States could ignore the Standard?**

- **Council decided that further actions were needed to mitigate the impact of the LPRs**

- **Measures to strengthen the implementation of the LPR Standards in a manner that they could not be ignored**

- **Resolution A36-11**

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Questions?

1. **What percentage of air operations from your State would be impacted by the English language proficiency requirements?**

2. **What percentage of air traffic controllers in your State will need to meet the English language proficiency requirements?**

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Questions?

1. **What percentage of air operations from your State would be impacted by the English language proficiency requirements?**

2. **What percentage of air traffic controllers in your State will need to meet the English language proficiency requirements?**

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A36-11, Basic Elements

- **Additional three years to comply (5 March 2011), provided:**
  - ➢ **States that do not comply post implementation plans on the ICAO website as soon as practicable, but no later than 5 March 2008**
  - ➢ **Implementation plans include risk mitigating measures**

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A36-11, Basic Elements

- **Urges States to waive the permission requirements under Article 40 for pilots from another State...if the implementation plan is acceptable**

- **Urges States not to restrict their operations into other States...if their implementation plan for air traffic controllers and radio station operators is acceptable**
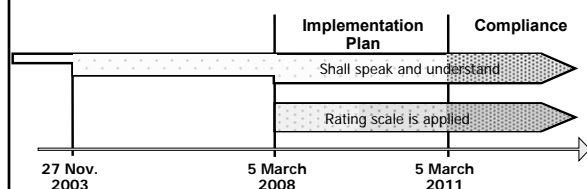
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From 5 March 2008 to 5 March 2011

	Implementation Plan	Compliance

Shall speak and understand

Rating scale is applied

| 27 Nov. 2003 | 5 March 2008 | 5 March 2011 |

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Continuing Responsibilities

- **Endorsement of licenses**
- **Notification of Differences**
- **AIP**

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Thank you!

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Module 2
Regulatory Framework

Language Proficiency
Implementation Plan Workshop
(Dubai, UAE 28 to 31 January 2008)

1

Module Objective

Using the ICAO guidelines and the workbook, participants will describe the status of their State's regulatory framework for the ICAO Language Proficiency Requirements

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2

"LPR Focal Point"

- **Is there a focal point in your State or in your organization for language proficiency implementation?**

- **What is their role?**

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3

Focal Point - Terms of Reference

- **Collect all the necessary information to complete the implementation plan;**
- **Post the implementation plan with ICAO;**
- **Assist in notifying a difference to ICAO and updating the AIP as necessary;**
- **Liaise with ICAO and other Contracting States requesting information on the national implementation plan;**

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Focal Point - Terms of Reference

- **Liaise regularly with national airlines and service providers, language testing and training organizations, pilots and controllers, and any other stakeholder involved in the implementation of language proficiency requirements within the State;**
- **Report any discrepancy or slippage of the implementation plan with the accountable managers and the appropriate authority; and**
- **Amend the implementation plan as progress towards full compliance is achieved.**

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Content of the Regulatory Framework

- **Essential to support implementation**
- **May consist of legislation, regulations or other documentary evidence (e.g. orders, advisory circulars, etc.)**
- **Should be enforceable**
- **If established, indicate reference. If not, indicate type of provisions and expected date that regulation will be in place**
- **Language testing oversight**

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Group Work
Regulatory Framework

- **All participants from a State work together**
- **Select one participant in the group to fill table no. 1 for the group**
- **Select one participant in the group that will present their regulatory framework at the end of this module**
- **Using Handout No. 1 in the workbook, complete table No. 1 in the workbook**

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QUESTIONS AND FEEDBACK

HANDOUT No. 1

NATIONAL REGULATORY FRAMEWORK

Language Provisions
Standards and Recommended Practices (SARPs)

		Language Provisions– English
ANNEX 1		1.2.9.1 Aeroplane, airship, helicopter and powered-lift pilots and those flight navigators who are required to use the radio telephone aboard an aircraft shall demonstrate the ability to speak and understand the language used for radiotelephony communications. *Note.— Pursuant to Article 42 of the Convention on International Civil Aviation, paragraph 1.2.9.1 does not apply to personnel whose licences are originally issued prior to 5 March 2004 but, in any case, does apply to personnel whose licences remain valid after 5 March 2008.*
		1.2.9.2 Air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications.
		1.2.9.4 As of 5 March 2008, aeroplane, airship, helicopter and powered-lift pilots, air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 1.
		1.2.9.6 As of 5 March 2008, the language proficiency of aeroplane, airship, helicopter and powered-lift pilots, air traffic controllers and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level.
		1.2.9.7 **Recommendation.—** *The language proficiency of aeroplane, airship, helicopter and powered-lift pilots, flight navigators required to use the radiotelephone aboard an aircraft, air traffic controllers and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) should be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level, as follows: a) those demonstrating language proficiency at the Operational Level (Level 4) should be evaluated at least once every three years; and b) those demonstrating language proficiency at the Extended Level (Level 5) should be evaluated at least once every six years.*
ANNEX 6 Part I		3.1.8 Operators shall ensure that flight crew members demonstrate the ability to speak and understand the language used for radiotelephony communications as specified in Annex 1.
ANNEX 6 Part III		1.1.3 Operators shall ensure that flight crew members demonstrate the ability to speak and understand the language used for radiotelephony communications as specified in Annex 1.

ANNEX 10, Volume II	5.1.1.1 ICAO standardized phraseology shall be used in all situations for which it has been specified. Only when standardized phraseology cannot serve an intended transmission, plain language shall be used.
	5.2.1.2.1 The air-ground radiotelephony communications shall be conducted in the language normally used by the station on the ground or in the English language. *Note 1.— The language normally used by the station on the ground may not necessarily be the language of the State in which it is located. A common language may be agreed upon regionally as a requirement for stations on the ground in that region.* *Note 2.— The level of language proficiency required for aeronautical radiotelephony communications is specified in the Appendix to Annex 1.*
	5.2.1.2.2 The English language shall be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes used by international air services.
	5.2.1.2.3 The languages available at a given station on the ground shall form part of the Aeronautical Information Publications and other published aeronautical information concerning such facilities.
ANNEX 11	2.29.1 An air traffic services provider shall ensure that air traffic controllers speak and understand the language(s) used for radiotelephony communications as specified in Annex 1.
	2.29.2 Except when communications between air traffic control units are conducted in a mutually agreed language, the English language shall be used for such communications.

Annex 1 General Rules about Licenses - Assessment

<table>
<tr>
<td rowspan="2">ANNEX 1</td>
<td>2.1.1.3.1 An applicant for any pilot licence or rating shall demonstrate, in a manner determined by the Licensing Authority, such requirements for knowledge and skill as are specified for that licence or rating.

4.1.2 An applicant, for any licence or rating for personnel other than flight crew members, shall demonstrate, in a manner determined by the Licensing Authority, such requirements in respect of knowledge and skill as are specified for that licence or rating.</td>
</tr>
</table>

Extracts from Document 7300
Convention on International Civil Aviation

Article 33

Recognition of certificates and licenses

Certificates of airworthiness and certificates of competency and licenses issued or rendered valid by the contracting State in which the aircraft is registered, shall be recognized as valid by the other contracting States, provided that the requirements under which such certificates or licences were issued or rendered valid are equal to or above the minimum standards which may be established from time to time pursuant to this Convention.

Article 38

Departures from international standards
and procedures

Any State which finds it impracticable to comply in all respects with any such international standard or procedure, or to bring its own regulations or practices into full accord with any international standard or procedure after amendment of the latter, or which deems it necessary to adopt regulations or practices differing in any particular respect from those established by an international standard, shall give immediate notification to the International Civil Aviation Organization of the differences between its own practice and that established by the international standard. In the case of amendments to international standards, any State which does not make the appropriate amendments to its own regulations or practices shall give notice to the Council within sixty days of the adoption of the amendment to the international standard, or
indicate the action which it proposes to take. In any such case, the Council shall make immediate notification to all other states of the difference which exists between one or more features of an international standard and the corresponding national practice of that State.

Article 39

Endorsement of certificates and licenses

a) Any aircraft or part thereof with respect to which there exists an international standard of airworthiness or performance, and which failed in any respect to satisfy that standard at the time of its certification, shall have endorsed on or attached to its airworthiness certificate a complete enumeration of the details in respect of which it so failed.

b) Any person holding a license who does not satisfy in full the conditions laid down in the international standard relating to the class of license or certificate which he holds shall have endorsed on or attached to his license a complete enumeration of the particulars in which he does not satisfy such conditions.
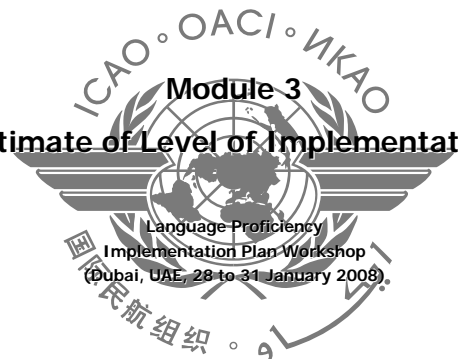
Article 40

Validity of endorsed certificates and licenses

No aircraft or personnel having certificates or licenses so endorsed shall participate in international navigation, except with the permission of the State or States whose territory is entered. The registration or use of any such aircraft, or of any certificated aircraft part, in any State other than that in which it was originally certificated shall be at the discretion of the State into which the aircraft or part is imported.

Table 1 – National Regulatory Framework

Focal Point Information			
Name			
Title			
Organization			
Telephone			
Fax			
E-mail			
	Compliance		
Standards and Recommended Practices (SARPs)	**Yes**, the regulatory framework is in place. *Indicate Reference*	The regulatory framework is **partially** in place. *Briefly describe what is in place, remaining work and expected date of completion*	**No**, the national regulatory framework has not yet been established. *Indicate the type of provision envisaged and the expected date of introduction*
Annex 1 — 1.2.9.1			
1.2.9.2			
1.2.9.4, Appendix 1, Attachment A			
1.2.9.6			
1.2.9.7 (Recommended Practice)			
5.1.1.2 XIII)			
Annex 6 — Part I – 3.1.8			
Part III – 1.1.3			
Annex 10, Volume II — 5.1.1.1			
5.2.1.2.1			
5.2.1.2.2			
5.2.1.2.3			
Annex 11 — 2.29.1			
2.29.2			

Module 3
Estimate of Level of Implementation

Language Proficiency
Implementation Plan Workshop
(Dubai, UAE, 28 to 31 January 2008)

1

Module Objective

Using the ICAO guidelines, provide an estimate of the national/organizational level of implementation. When the data is not available, identify the source of information and establish a plan to obtain the information.

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2

Purpose of Estimate

- **Snapshot to be updated at regular intervals**
- **From minimal implementation activities to nearly full compliance**
- **Input from operators and ANSPs**
- **Variety of sources (diagnostic tests, interviews, sampling, licensing tests, etc.)**

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3

Estimates for Pilots

For ATPL, CPL and MPL
- ➤ **Specific data**
- ➤ **Level 3 and above**

For PPL
- ➤ **General information**

For all, describe the method of assessment

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Estimates for Controllers

- **Aerodrome, Approach, Area and Student**

- **Level 3 and above**

- **Method of Assessment**

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Aeronautical Station Operators

Small number: data not required

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Assignment

With your team

➢**Complete table 2;**

➢**If you do not have the data, identify a source where you could obtain that data.**

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Table 2 – ATPL, CPL, MPL

Date:				
	ATPL	**CPL**	**MPL**	**Assessment**
Level 3 and below				
Level 4				
Level 5				
Level 6				

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PPLs

• **Number of PPLs in international operations**

• **Assessment of level of proficiency**

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Table 2 – Controllers

Date:	Aerodrome	Approach	Area	Assessment
Level 3 and below				
Level 4				
Level 5				
Level 6				

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QUESTIONS AND FEEDBACK

Table 2 – Estimate of National Level of Implementation

Date:				
Pilots involved in international operations	**ATPL**	**CPL**	**MPL**	**Method of Assessment of Level of Proficiency**
Level 3 and below				
Level 4				
Level 5				
Level 6				
		PPL		
Date:				
Indicate number of PPLs involved in international operations		Briefly described the method of Assessment of Level of Proficiency		

Date:					
Controllers involved in international operations	**Aerodrome**	**Approach**	**Area**	**Student**	**Method of Assessment of Level of Proficiency**
Level 3 and below					
Level 4					
Level 5					
Level 6					

Module 4

Training & Assessment

Language Proficiency
Implementation Plan Workshop
(Dubai, UAE, 28 to 31January 2008)

1

Module Objective

Using the ICAO guidelines, indicate:

- if the State has established an oversight of language training and assessment programmes,

- who will provide training, and

- who will develop and administer licensing testing.

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2

Training & Assessment

- **The relationship of training and assessment – The washback effect**

- **Assessment: A State's responsibility (Annex 1, paras 2.1.1.3.1 and 4.1.2)**

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3

Training should address:

- **Holistic descriptors (Annex 1, Appendix 1)**
- **ICAO Rating Scale (Annex 1, Attachment A)**
- **Best practices (Document 9835)**

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Assessment (or Testing)

- **Information required for testing for <u>licensing</u> purposes only**
- **For initial and recurrent testing**

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Table 3 - Training

- **State Oversight? If no, when?**
- **Provided by?**

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Table 4 – Assessment (Testing)

- **State Oversight? If no, when?**
- **Developed by?**
- **Administered by?**

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QUESTIONS AND FEEDBACK

Table 3 – Language Proficiency Training Programmes

State oversight of aviation language training has been established. Yes ❑ No ❑	If no, expected date of establishment:
Language Training will be provided through: (Check all that apply)	
Air Navigation Service Provider ❑	
Air Operator/Airline ❑	
Educational Institutions ❑	
Private organizations ❑	

Table 4 – Language Proficiency Assessment (or Testing) for Licensing Purposes

State oversight of aviation language assessment has been established.	Yes ❑ No ❑	If no, expected date of establishment:

Pilots	
The Language Proficiency Assessment was/is/will be developed by:	
Civil Aviation Authority	❑
Air Operator	❑
Educational Institution	❑
Private Organization *Optionally, indicate the private organization used*	❑
The Language Proficiency Assessment was/is/will be administered by:	
Civil Aviation Authority	❑
Air Operator	❑
Educational Institution	❑
Private Organization *Optionally, indicate the private organization used*	❑

Controllers	
The Language Proficiency Assessment was/is/will be developed by:	
Civil Aviation Authority	❑
Air Navigation Service Provider	❑
Educational Institution	❑
Private Organization *Optionally, indicate the private organization used*	❑
The Language Proficiency Assessment was/is/will be administered by:	❑
Civil Aviation Authority	❑
Air Navigation Service Provider	❑
Educational Institution	❑
Private Organization *Optionally, indicate the private organization used*	❑

Module 5

Interim Measures

**Language Proficiency
Implementation Plan Workshop
(Dubai, UAE, 28 to 31 January 2008)**

1

Module Objective

Identify potential hazards and risks that may arise from non-compliance with language proficiency requirements with a view to introducing interim mitigating measures if necessary

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2

Outline

- **Key safety management concept**
- **Definitions**
- **Understanding hazards**
- **Identifying hazards**
- **Analysing hazards**
- **Risk management**
- **Risk probability**
- **Risk severity**
- **Risk assessment and tolerability**
- **Risk control/mitigation**

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3

Safety Space
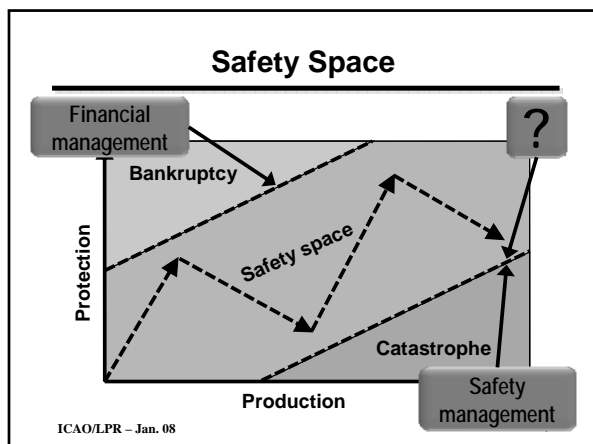
Two Definitions

Hazard – Condition, object or activity with the potential **of causing injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.**

For example: 1) A wind of 15 knots blowing directly across the runway is a hazard. 2) Language Proficiency in Communications is a hazard. 3) Aerodrome signage is a hazard.

Consequence – Potential outcome(s) of the hazard

For example: 1) The potential that a pilot may not be able to control the aircraft during takeoff or landing is one of the consequences of the hazard. 2) and 3) that a runway incursion may occur is one of the consequence of the hazard.

5

Understanding hazards

Types of hazards

➢**Natural**

➢**Technical**

➢**Economic**

6

Examples of natural hazards

Severe weather or climatic events:
- E.g.: hurricanes, major winter storms, drought, tornadoes, thunderstorms lighting, and wind shear.

Adverse weather conditions:
- E.g.: Icing, freezing precipitation, heavy rain, snow, winds, and restrictions to visibility.

Geophysical events:
- E.g.: earthquakes, volcanoes, tsunamis, floods and landslides.

Geographical conditions:
- E.g.: adverse terrain or large bodies of water.

Environmental events:
- E.g.: wildfires, wildlife activity, and insect or pest infestation.

Public health events:
- E.g.: epidemics of influenza or other diseases.

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Examples of technical hazards

Deficiencies regarding:

- E.g.: aircraft and aircraft components, systems, subsystems and related equipment.
- E.g.: an organization's facilities, tools, and related equipment.
- E.g.: facilities, systems, sub-systems and related equipment that are external to the organization.

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Examples of economics hazards

Major trends related to:

- Growth
- Recession
- Cost of material or equipment
- Etc.

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Understanding hazards

There is a natural tendency to describe hazards as their consequence(s).
➢ "Unclear aerodrome signage" **vs.** "runway incursion"

Stating a hazard as consequence(s)
➢ disguises the nature of the hazard
➢ interferes with identifying other important consequences.

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Identifying Hazards and Specific Components of Hazards

In order to identify hazards, consider:

➢ Design factors, including equipment and task design.

➢ Procedures and operating practices, including documentation and checklists.

➢ Communications, including means, terminology and <u>language</u>.

➢ …

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Identifying Hazards and Specific Components of Hazards

… consider:

➢ **Organizational factors, such as company policies for recruitment, training, remuneration and allocation of resources.**

➢ **Work environment factors, such as ambient noise and vibration, temperature, lighting and protective equipment and clothing.**

➢ …

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Identifying Hazards and Specific Components of Hazards

… **consider:**

➤ **Regulatory factors, including the applicability and enforceability of regulations; certification of equipment, personnel and procedures; and the adequacy of oversight.**

➤ **Defences including detection and warning systems, and the extent to which the equipment is resilient against errors and failures.**

➤ **Human performance, including medical conditions and physical limitations.**

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Identifying Hazards and Specific Components of Hazards

Specific conditions

➤**Unexplained increase in safety-related events or infractions.**

➤**Major operational changes are foreseen.**

➤**Periods of significant organizational change.**

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Analyzing Hazards

<u>ABC</u> **of hazard analysis**

<u>A</u> **– State the generic hazard** *(hazard statement)*
  ➤**Airport construction**

<u>B</u> **– Identify specific components of the hazard**
  ➤**Construction equipment**
  ➤**Closed taxiways**
  ➤**…**

<u>C</u> **– Naturally leading to specific consequence(s)**
  ➤**Aircraft colliding with construction equipment**
  ➤**Aircraft taking wrong taxiway**
  ➤**…**

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Analyzing Hazards for Language Proficiency

<u>ABC</u> of hazard analysis

<u>A</u> – State the generic hazard *(hazard statement)*
- ➢**Communications**

<u>B</u> – Identify specific components of the hazard
- ➢**English language proficiency in RT communications**
- ➢**Phraseology**
- ➢…

<u>C</u> – Naturally leading to specific consequence(s)
- ➢**Runway incursion**
- ➢**Airspace incursion**
- ➢…

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Analyzing Hazards

Efficient and safe operations or provision of service require a constant balance between production goals…
- ➢ *maintaining regular aerodrome operations during a runway construction project*

…and safety goals
- ➢ *maintaining existing margins of safety in aerodrome operations during runway construction project*

Aviation workplaces may contain hazards which may not be **cost-effective to address even when operations must continue.**

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Sources of Hazard Identification

Internal
- ➢ **Flight Data Analysis**
- ➢ **Company voluntary reporting system**
- ➢ **Audits and surveys**

External
- ➢ **Accident reports**
- ➢ **State mandatory occurrence system**

As a reminder
- ➢ **Predictive**
- ➢ **Proactive**
- ➢ **Reactive**

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Questions

- **What is a hazard?**
- **What is a consequence?**
- **Give an example of hazard and of a related consequence**

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Answer

Hazard – Condition, object or activity with the potential **of causing injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.**

For example: 1) A wind of 15 knots blowing directly across the runway is a hazard. 2) Language Proficiency in Communications is a hazard. 3) Aerodrome signage is a hazard.

Consequence – Potential outcome(s) of the hazard

For example: 1) The potential that a pilot may not be able to control the aircraft during takeoff or landing is one of the consequences of the hazard. 2) and 3) that a runway incursion may occur is one of the consequence of the hazard.

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Definition of risk

Risk – The assessment, expressed in terms of predicted probability **and** severity, **of the consequence(s) of a hazard taking as reference the worst foreseeable situation.**

- ➢ A wind of 15 knots blowing directly across the runway is a **hazard**.
- ➢ The potential that a pilot may not be able to control the aircraft during takeoff or landing is one of the **consequences** of the hazard.
- ➢ The assessment of the consequences of the potential loss of control of the aircraft by the pilot expressed in terms of probability and severity is the **risk**.
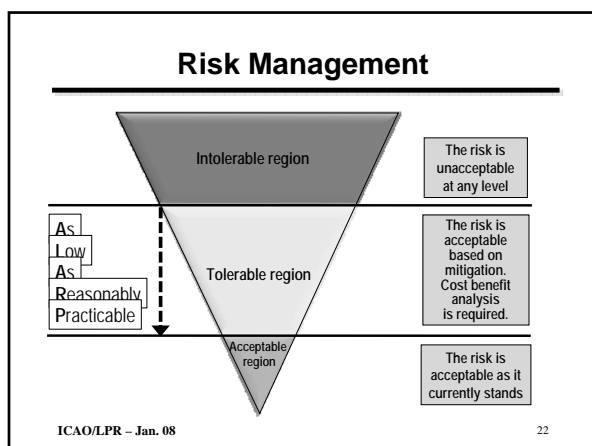
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Risk Management

Intolerable region	The risk is unacceptable at any level
As Low As Reasonably Practicable	
Tolerable region	The risk is acceptable based on mitigation. Cost benefit analysis is required.
Acceptable region	The risk is acceptable as it currently stands

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Risk Management

What is it?
> **The** identification, analysis **and** elimination, **and/or** mitigation **to an acceptable level of risks that threaten the capabilities of an organization.**

What is the objective?
> **Aims at a balanced allocation of resources to address** all **risks and viable** risk **control and mitigation.**

Why is it important?
> **A key component of safety management systems.**
> **Data-driven approach to safety resources allocation, thus defensible and easier to explain.**

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Cost-benefit analysis

Direct costs
> **The obvious costs, which are easily determined. The high costs of exposure of hazards can be reduced by insurance coverage.**
>> **Purchasing insurance only transfers monetary risk,** does not address the safety hazard

Indirect costs
> **The uninsured costs. An understanding of uninsured costs (or indirect costs) is fundamental to understand the economics of safety.**

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Cost-benefit analysis

Indirect costs may amount to more than the direct costs resulting from exposure to hazards:

> **Loss of business**
> **Damage to the reputation**
> **Loss of use of equipment**
> **Loss of staff productivity**
> **Legal actions and claims**
> **Fines and citations**
> **Insurance deductibles**

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Risk probability

Definition(s)

> Probability **– The likelihood that an unsafe event or condition might occur.**

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Risk probability

Questions **for assessing the probability of an occurrence:**

> **Is there a history of occurrences like the one being assessed, or is the occurrence an isolated event?**

> **What other equipment, or similar type components, might have similar defects?**

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Risk probability

… **questions such as:**

> **What number of operating or maintenance personnel must follow the procedure (s) in question?**

> **How frequently is the equipment or procedure under assessment used?**

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Risk probability

Probability of occurrence		
Qualitative definition	Meaning	Value
Frequent	Likely to occur many times *(has occurred frequently)*	**5**
Occasional	Likely to occur some times *(has occurred infrequently)*	**4**
Remote	Unlikely, but possible to occur *(has occurred rarely)*	**3**
Improbable	Very unlikely to occur *(not known to have occurred)*	**2**
Extremely improbable	Almost inconceivable that the event will occur	**1**

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Risk severity

Definition

> Severity **– The possible consequences of an unsafe event or condition, taking as reference the** worst foreseeable situation.

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Risk severity

Define the severity in terms of:

- ➢ **Property**
- ➢ **Finance**
- ➢ **Liability**
- ➢ **People**
- ➢ **Environment**
- ➢ **Image**
- ➢ **Public confidence**

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Risk severity

Questions **for assessing the severity of an occurrence:**

- ➢ **How many** lives are at risk?
    - ➢**Employees**
    - ➢**Passengers**
    - ➢**Bystanders**
    - ➢**General public**
- ➢ **What is the** environmental impact?
    - ➢**Spill of fuel or other hazardous product**
    - ➢**Physical disruption of natural habitat**

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Risk severity

… questions such as:

- ➢ **What is the severity of the** property or financial damage?
    - ➢**Direct operator property loss**
    - ➢**Damage to aviation infrastructure**
    - ➢**Third party damage**
    - ➢**Financial impact and economic impact for the State**
- ➢ **Are there** organizational, management or regulatory implications **that might generate larger threats to public safety?**
- ➢ **What are the likely** political implications **and/or** media interest?

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Risk severity

Severity of occurrences		
Aviation definition	Meaning	Value
Catastrophic	➢Equipment destroyed. ➢Multiple deaths.	A
Hazardous	➢A large reduction in safety margins, physical distress or a workload such that the operators cannot be relied upon to perform their tasks accurately or completely. ➢Serious injury. ➢Major equipment damage.	B
Major	➢A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of increase in workload, or as a result of conditions impairing their efficiency. ➢Serious incident. ➢Injury to persons.	C
Minor	➢Nuisance. ➢Operating limitations. ➢Use of emergency procedures. ➢Minor incident.	D
Negligible	➢Little consequences	E

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Risk assessment

Risk probability	Risk severity				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent 5	5A	5B	5C	5D	5E
Occasional 4	4A	4B	4C	4D	4E
Remote 3	3A	3B	3C	3D	3E
Improbable 2	2A	2B	2C	2D	2E
Extremely improbable 1	1A	1B	1C	1D	2E

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Risk tolerability

Risk management	Assessment risk index	Suggested criteria
Intolerable region	5A, 5B, 5C, 4A, 4B, 3A	Unacceptable under the existing circumstances
Tolerable region	5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C	Acceptable based on risk mitigation. It might require management decision
Acceptable region	3E, 2D, 2E, 1A, 1B ,1C, 1D, 1E	Acceptable

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Risk control/mitigation

Definition(s)

➢ Mitigation **– Measures to address the potential hazard or to reduce the risk probability or severity.**

➢ **Risk mitigation = Risk control**

(Mitigate – To make milder, less severe or less harsh)

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Risk control/mitigation

Strategies

➢Avoidance **– The operation or activity is cancelled because risks exceed the benefits of continuing the operation or activity.**

➢*Operations into an aerodrome surrounded by complex geography and without the necessary aids are cancelled.*

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Risk control/mitigation

Strategies

➢Reduction – **The frequency of the operation or activity is reduced, or action is taken to reduce the magnitude of the consequences of the accepted risks.**

➢**Operations into an aerodrome surrounded by complex geography and without the necessary aids are limited to day-time, visual conditions.**

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Risk control/mitigation

Strategies

➢ Segregation of exposure – **Action is taken to isolate the effects of risks or build-in redundancy to protect against it.**

➢**Operations into an aerodrome surrounded by complex geography are limited to aircraft with specific/performance navigation capabilities.**

➢**Non RVSM equipped aircraft not allowed to operate into RVSM airspace.**

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Safety risk management at a glance

Equipment, procedures, organization, etc.	⬅	**Hazard identification**
Analyse the likelihood of the risk(s) occurring	⬅	**Risk analysis** Probability
Evaluate the seriousness of the risk(s) occurring	⬅	**Risk analysis** Severity
Is the assessed risk(s) acceptable and within the organization's safety performance criteria	⬅	**Risk assessment and tolerability**
Yes, accept the risk(s)	No, take action to reduce the risk(s) to an acceptable level	⬅ **Risk control /mitigation**

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Defences

Recalling the three basic defences in aviation:

➢**Technology**

➢**Training**

➢**Regulations**

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Defences

As part of the risk mitigation, determine:

> **Do defences to protect against such risk (s) exist?**

> **Do defences function as intended?**

> **Are the defences practical for use under actual working conditions?**

> **Is staff involved aware of the risks and the defences in place?**

> **Are additional risk mitigation measures required?**

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As a reminder

There is no such thing as absolute safety – In aviation it is not possible to eliminate all risks.

Risks can be managed to a level "as low as reasonably practicable" (ALARP)

Risk mitigation must be balanced against:

> time
> cost
> difficulty of taking measures to reduce or eliminate the risk (i.e. managed).

Effective risk management seeks to maximize the benefits of accepting a risk **(a reduction in time and cost) while** minimizing the risk itself.

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Job Aid

Type of Operation or activity	Generic Hazard (Hazard Statement)	Specific Component of the hazard	Hazard-related consequences	Existing defences to control risk(s) and risk index	Further action to reduce risk(s) and resulting risk index
Pilots – Commercial Multi-pilot Operations					
General Aviation-Multi-pilot Operations					
General Aviation-Single pilot Operations					
Controllers					
Aeronautical Station Operators					

Implementation Plan

Pilots (international operations)	2008	2009	2010
Commercial multi-pilot operations			
General aviation multi-pilot operations			
Commercial single-pilot operations			
General aviation single-pilot operations			
Controllers			
Aeronautical Station Operators			

Job Aid for the identifcation of Hazard and Risks related to
Language Proficiency
Examples

No.	Type of operation or activity	Generic Hazard (Hazard Statement)	Specific components of the hazard	Hazard-related consequences	Existing defences to control risk(s) and risk index	Further action to reduce risk(s) and resulting risk index
1	Pilots - Commercial Multi-pilot Operations	Lack of English Language Proficiency	Misunderstanding, Deviation from instructions, Unintelligibility	near misses; runway incursions; airspace incursions;	Regulations defense? Route qualification and authorization? Training defense? Language training and testing? Risk Index: TBD by airlines Risk tolerability:TBD by airlines	Risk Index: Risk tolerability:
2	General Aviation - Multi-pilot Operations				Risk Index: Risk tolerability:	Risk Index: Risk tolerability:
3	General Aviation - Single pilot operations				Risk Index: Risk tolerability:	Risk Index: Risk tolerability:
4	Controllers	Lack of English Language Proficiency	Misunderstanding, Deviation from instructions, Unintelligibility	near misses; runway incursions; airspace incursions;	Regulations defense? Sector qualification? Training defense? Language training and testing? Risk Index: TBD by airlines Risk tolerability:TBD by airlines	Risk Index: Risk tolerability:
5	Aeronautical Station Operators				Risk Index: Risk tolerability:	Risk Index: Risk tolerability:

Table 5 – Interim Measures to Mitigate the Risk

Pilots (international operations)	2008	2009	2010
Commercial multi-pilot operations			
General aviation multi-pilot operations			
Commercial single-pilot operations			
General aviation single-pilot operations			
Controllers			
Aeronautical Station Operators			

Module 6

Notifying differences with ICAO

**Language Proficiency
Implementation Plan Workshop
(Dubai, UAE, 28 to 31 January 2008)**

1

Module Objective

Using the completed draft table 1
(national regulatory framework),
participants will draft the notification of
compliance with or differences from
language provisions in Annexes 1, 6,
10 and 11.

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2

Question

**Which article of the Chicago
Convention addresses the notification
of differences?**

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3

Answer

Article 38 (Departures from international standards and procedures):

➢ Notify Council within 30 days of applicability date

➢ Council immediately notifies all other States

Also update Aeronautical Information Packages (AIPs)

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Notification of Differences

- **Part of the implementation plan**

- **Plan to be completed as soon as possible but no later than 5 March 2008 (A36-11)**

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Instructions for Posting Plans

- **In .pdf format**
- **Posted in language in which plans are provided**
- **Encouraged to provide plans in English**
- **Send to fls@icao.int**

  Note: implementation plans posted on the FSIX website are not reviewed or approved by ICAO

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Information

- **State Letter AN 12/44.6-07/68**
- **FSIX Website:**
  http://www.icao.int/fsix/
- **Flight Safety Section: fls@icao.int**

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QUESTIONS AND FEEDBACK

**NOTIFICATION OF COMPLIANCE WITH OR
DIFFERENCES FROM LANGUAGE PROVISIONS IN
ANNEXES 1, 6, 10 AND 11**

(Reference to Table 1, paragraph 3, Attachment B)

To: The Secretary General
     International Civil Aviation Organization
     999 University Street
     Montreal, Quebec
     Canada H3C 5H7

1.   No differences will exist on ———————————————————— between
the   national   regulations   and/or   practices   of
(State) ———————————————————— and the language provisions as
detailed in Table 1, paragraph 3 of Attachment B of this State letter.

2.   The   following   differences   will   exist
on ———————————————————— between the regulations and/or practices of
(State) ———————————————————— and the provisions the language
provisions as detailed in Table 1, paragraph 3 of Attachment B of this State letter. (Please see
Note 3) below.)

a)	**Annex Provision** (Please give exact paragraph reference)	b)	**Difference Category** (Please indicate A, B, or C)	c)	**Details of Difference** (Please describe the difference clearly and concisely)	d)	**Remarks** (Please indicate reasons for the difference)

(Please use extra sheets as required)

3.   By the dates indicated below,

(State) ——————————————————— will have complied with the language provisions as detailed in Table 1, paragraph 3 of Attachment B of this State letter for which differences have been notified in 2 above.

a)	**Annex Provision** (Please give exact paragraph reference)	**b)**	**Date**	**c)**	**Comments**

(Please use extra sheets as required)

Signature ——————————————————

Date   ——————————————————

NOTES

1)   If paragraph 1 above is applicable to you, please complete paragraph 1 and return this form to ICAO Headquarters. If paragraph 2 is applicable to you, please complete paragraphs 2 and 3 and return the form to ICAO Headquarters.

2)   Please dispatch the form to reach ICAO Headquarters as soon as possible but prior to 5 March 2008.

3)   A detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.

4)   Guidance on the notification of differences from language provisions is provided in the Note on the Notification of Differences at http://www.icao.int/fsix/.

5)   Please send a copy of this notification to the ICAO Regional Director accredited to your Government.

**NOTE ON THE NOTIFICATION OF DIFFERENCES
AND FORM OF NOTIFICATION WITH RESPECT TO
LANGUAGE PROVISIONS IN ANNEXES 1, 6, 10 AND 11**
(*Prepared and issued in accordance with instructions of the Council*)

1.   *Introduction*

1.1   The Assembly and the Council, when reviewing the notification of differences by States in compliance with Article 38 of the Convention, have repeatedly noted that the state of such reporting is not entirely satisfactory.

1.2   With a view to achieving a more comprehensive coverage, this note is issued to facilitate the determination and reporting of such differences and to state the primary purpose of such reporting.

1.3   The primary purpose of reporting of differences is to promote safety and efficiency in air navigation by ensuring that governmental and other agencies, including operators and service providers, concerned with international civil aviation are made aware of all national regulations and practices in so far as they differ from those prescribed in the ICAO Standards.

1.4   Contracting States are, therefore, requested to give particular attention to the notification before 5 March 2008 of differences with respect to language provisions in Annexes 1, 6, 10 and 11. The Council has also urged Contracting States to extend the above considerations to Recommended Practices.

1.5   Contracting States are asked to note further that it is necessary to make an explicit statement of intent to comply where such intent exists, or where such is not the intent, of the difference or differences that will exist. ~~This statement should be made not only to the latest amendment but to the whole Annex, including the amendment.~~

1.6   If previous notifications have been made in respect language provisions in Annexes 1, 6, 10 and 11, detailed repetition may be avoided, if appropriate, by stating the current validity of the earlier notification. States are requested to provide updates of the differences previously notified after each amendment, as appropriate, until the difference no longer exists.

2.   *Notification of differences to* language provisions in Annexes 1, 6, 10 and 11

~~2.1   Past experience has indicated that the reporting of differences to Annex 6, Part I has in some instances been too extensive since some appear merely to be a different manner of expressing the same intent.~~

2.~~2~~1   Guidance to Contracting States in the reporting of differences to language provisions in Annexes 1, 6, 10 and 11~~Annex 6, Part I~~ can only be given in very general terms. Where the national regulations of States call for compliance with procedures that are not identical but essentially similar to those contained in the Annex, no difference should be reported since the details of the procedures existing are the subject of notification through the medium of aeronautical information publications. Although differences to Recommended Practices are not notifiable under Article 38 of the Convention, Contracting States are urged to notify the Organization of the differences between their national regulations and practices and any corresponding Recommended Practices contained in an Annex. States should categorize each difference notified on the basis of whether the corresponding national

regulation is:

a) ***More exacting or exceeds the ICAO Standard or Recommended Practice (SARP) (Category A)***. This category applies when the national regulation is more demanding than the corresponding SARP, or imposes an obligation within the scope of the Annex which is not covered by a SARP. This is of particular importance where a State requires a higher standard which affects the operation of aircraft of other Contracting States in and above its territory;

b) ***Different in character or other means of compliance (Category B)***[*]. This category applies when the national regulation is different in character from the corresponding ICAO SARP, or when the national regulation differs in principle, type or system from the corresponding SARP, without necessarily imposing an additional obligation; and

c) ***Less protective or partially implemented/not implemented (Category C)***. This category applies when the national regulation is less protective than the corresponding SARP; or when no national regulation has been promulgated to address the corresponding SARP, in whole or in part.

2.2   For States that have already fully reported differences to language provisions in Annexes 1, 6, 10 and 11~~from Annex 6, Part I~~or have reported that no differences exist, the reporting of any further differences ~~occasioned by the amendment~~ should be relatively straightforward.~~; however, attention is called to paragraph 1.5 wherein it is indicated that this statement should be not only to the latest amendment but to the whole Annex, including the amendment.~~

3.   *Form of notification of differences*

3.1   Differences should be notified in the following form:

a)   *Reference*: The number of the paragraph or subparagraph in ~~Annex 6, Part I~~Annexes 1, 6, 10 and 11 as amended which contains the Standard or Recommended Practice to which the difference relates;

---

[*] The expression "different in character or other means of compliance" in b) would be applied to a national regulation which achieves, by other means, the same objective as that of the corresponding ICAO SARPs and so cannot be classified under a) or c).

b) *Category*: Indicate the category of the difference as A, B or C in accordance with paragraph 2.2 above.

c) *Description of the difference*: Clearly and concisely describe the difference and its effect;

d) *Remarks*: Under "Remarks" indicate reasons for the difference and intentions including any planned date for implementation.

3.2   The differences notified will be recorded in a Supplement to the Annex, normally in the terms used by the Contracting State when making the notification. In the interest of making the supplement as useful as possible, please make statements as clear and concise as possible and confine remarks to essential points. ~~Comments on implementation, in accordance with paragraph 4 b) 2) of the Resolution of Adoption, should not be combined with those concerning differences.~~ The provision of extracts from national regulations cannot be considered as sufficient to satisfy the obligation to notify differences. General comments that do not relate to specific differences will not be published in Supplements.

State Letter
Resolution A36-11:
Proficiency in the English language
used for radiotelephony

Tel.:   +1 (514) 954-8219 ext. 8153

Ref.:   AN 12/44.6-07/68   26 October 2007

Subject: 36th Session of the Assembly - Resolution
A36-11: Proficiency in the English language used for
radiotelephony

Action required: a) To note the Assembly resolution;
b) where applicable, to develop a language proficiency
implementation plan by 5 March 2008; and c) to notify
ICAO with the names and contact details of language
proficiency focal points, as soon as possible

Sir/Madam,

1.   I have the honour to invite your attention to the attached Resolution A36-11 on
Proficiency in the English language used for radiotelephony communications, as well as to the language
proficiency requirements set out in Annex 1 — *Personnel Licensing*, Annex 6 — *Operation of Aircraft*,
Annex 10 — *Aeronautical Telecommunications* and Annex 11 — *Air Traffic Services*. Background may
be   found   in   the   Report   of   the   Technical   Commission   on   Agenda   Item   30   at
http://www.icao.int/Assembly36.

2.   The resolution urges Contracting States that are not in a position to comply with the
language proficiency requirements by the applicability date to post their language proficiency
implementation plans including their interim measures to mitigate risk, as required, for pilots, air traffic
controllers and aeronautical station operators involved in international operations on the ICAO website in
accordance with the resolution's Associated Practices and ICAO guidance material. The resolution also
directs the Council to provide guidelines to States on the development of implementation plans, including
an explanation of the risk mitigation measures so as to enable Contracting States to post their plans as
soon as practicable, but prior to 5 March 2008.

3.   An implementation plan will provide a Contracting State that is not in a position to
comply with the language proficiency requirements by the applicability date of 5 March 2008 with a
means of communicating, in a transparent manner, the steps which that State will take to meet the
requirements and to mitigate risks during a transition period from the applicability date until
5 March 2011. In this respect, the Organization has developed the guidelines at Attachment B to this

State letter. These guidelines which can be accessed through the FSIX website (http://www.icao.int/fsix/) will be adjusted over time and I invite you to consult them on a regular basis.

4.   States who will comply with the language proficiency requirements by the 5 March 2008 applicability date need not prepare an implementation plan, but should advise ICAO of their intent using the form at Attachment C which has been provided for that purpose. Moreover, all States are invited to provide to ICAO the name, title and contact details of their focal points for the implementation of language proficiency requirements, as soon as possible.

5.   States are invited to send their implementation plans, their focal point details, and their Notification of compliance with or differences from language provisions in Annexes 1, 6, 10 and 11 as necessary to ICAO by e-mail at fls@icao.int. ICAO will post this information on the FSIX website.

6.   Additionally, in order to assist States with the development of implementation plans for language proficiency requirements, workshops will be conducted in each of the ICAO Regions prior to March 2008. You are invited to communicate with the ICAO Regional Office accredited to your Stat for more information on these workshops. The workshops are scheduled as follows:

- European and North Atlantic Region – Minsk, Belarus, 4 to 6 December 2007

- South American Region – Lima, Peru, 10 to 12 December 2007

- Asia and Pacific Region – Bangkok, Thailand, 29 to 31 January 2008

- Middle East Region – Location to be determined, 28 to 31 January 2008

- Western and Central African Region – Dakar, Senegal, 5 to 8 February 2008

- Eastern and South African Region – Nairobi, Kenya, 11 to 13 February 2008

- North American, Central American and Caribbean Region – Workshop conducted in English, Mexico, 5 to 7 February 2008; Workshop conducted in Spanish, location to be determined, 28 to 30 January 2008

7.   I wish to further invite you to note that Resolution A36-11 urges all Contracting States to use ICAO standardized phraseology in all situations for which it has been specified.

Accept, Sir/Madam, the assurances of my highest consideration.

Taïeb Chérif
Secretary General

Enclosures:
A — Assembly Resolution A36-11
B — Guidelines for the Development of a Language
    Proficiency Implementation Plan
C — Notification of compliance with or differences from
    language provisions in Annexes 1, 6, 10 and 11

RESOLUTION A36-11 - PROFICIENCY IN THE ENGLISH LANGUAGE USED FOR RADIOTELEPHONY COMMUNICATION

A36-11:	Proficiency in the English language used for radiotelephony communications

Whereas to prevent accidents, ICAO introduced language provisions to ensure that air traffic personnel and pilots are proficient in conducting and comprehending radiotelephony communications in the English language, including requirements that the English language shall be available on request at all stations on the ground serving designated airports and routes used by international air services;

Recognizing that the language provisions reinforce the requirement to use ICAO standardized phraseology in all situations for which it has been specified;

Recognizing that Contracting States have made substantial efforts to comply with the language proficiency requirements by 5 March 2008;

Recognizing that some Contracting States encounter considerable difficulties in implementing the language proficiency requirements including the establishment of language training and testing capabilities;

Recognizing that some Contracting States will require additional time to implement the language proficiency provisions beyond the applicability date;

Whereas in accordance with Article 38 of the Convention any Contracting State which finds it impracticable to comply in all respects with any international standard or procedure is obliged to give immediate notification to ICAO;

Whereas in accordance with Article 39 b) of the Convention any person holding a license not satisfying in full the conditions laid down in the international standard relating to the class of license or certificate held, shall have endorsed on or attached to the license all the particulars in which this person does not satisfy such conditions; and

Whereas pursuant to Article 40 of the Convention no personnel having certificates or licences so endorsed shall participate in international navigation, except with the permission of the State or States whose territory is entered;

The Assembly:

1. *Urges* the Contracting States to use ICAO standardized phraseology in all situations for which it has been specified;

2. *Directs* the Council to support Contracting States in their implementation of the language proficiency requirements by establishing globally harmonized language testing criteria;

3. *Urges* Contracting States that are not in a position to comply with the language proficiency

requirement by the applicability date to post their language proficiency implementation plans including their interim measures to mitigate risk, as required, for pilots, air traffic controllers and aeronautical station operators involved in international operations on the ICAO website as outlined in accordance with the Associated Practices below and ICAO guidance material;

4. *Directs* the Council to provide guidelines to States on the development of implementation plans, including an explanation of the risk mitigation measures so as to enable Contracting States to post their plans as soon as practicable, but prior to 5 March 2008;

5. *Urges* Contracting States to waive the permission requirement under Article 40 of the Convention, in the airspace under their jurisdiction for pilots who do not yet meet the ICAO language proficiency requirements, for a period not exceeding three years after the applicability date of 5 March 2008, provided that the States which issued or rendered valid the licences have made their implementation plans available to all other Contracting States;

6. *Urges* Contracting States not to restrict their operators, conducting commercial or general aviation operations, from entering the airspace under the jurisdiction or responsibility of other States where air traffic controllers or radio station operators do not yet meet the language proficiency requirements for a period not exceeding three years after the applicability date of 5 March 2008, provided that those States have made their implementation plans available to all other Contracting States;

7. *Urges* Contracting States to provide data concerning their level of implementation of the Language Proficiency Requirements when requested by ICAO;

8. *Requests* the Council to submit to the next ordinary session of the Assembly a report regarding the implementation of the ICAO language proficiency requirements; and

9. *Declares* that this resolution supersedes Resolution A32-16.

Associated Practices

Contracting States that are not able to meet the language proficiency requirements by 5 March 2008 should:

1. Develop implementation plans for the language proficiency requirements that include the following:

   a) a timeline for adoption of the language proficiency requirements in their national regulations;

   b) a timeline for establishment of language training and assessment capabilities;
   c) a description of a risk based prioritization system for the interim measures to be put in place until full compliance with the language proficiency requirements is achieved;

   d) a procedure for endorsing licences to indicate the holders' language proficiency level; and

   e) designation of a national focal point in relation to the English language proficiency implementation plan;

2. Make their language proficiency implementation plans available to all other Contracting States by posting their plans on the ICAO website as soon as practicable, but prior to 5 March 2008;

3. Notify ICAO of differences to the language proficiency Standards and Recommended Practices; and

4. Publish differences to the language proficiency requirements in relation to the provision of air navigation services in their Aeronautical Information Publications.

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**GUIDELINES FOR THE DEVELOPMENT OF A LANGUAGE PROFICIENCY
IMPLEMENTATION PLAN**

1.   **BACKGROUND**

1.1   The decision to address language proficiency for pilots and air traffic controllers is long standing and was first made by the 32nd Session of the Assembly in September 1998 as a direct response to an accident that cost the lives of 349 persons, as well as previous fatal accidents where the lack of proficiency in English was a causal factor. Subsequently, the Air Navigation Commission initiated the development of language provisions in Annex 1 — *Personnel Licensing*, Annex 6 — *Operation of Aircraft*, Annex 10 — *Aeronautical Telecommunications*, and Annex 11 — *Air Traffic Services*. On 5 March 2003, the Council adopted Amendment 164 to Annex 1. As of 5 March 2008, the ability to speak and understand the language used for radiotelephony that is currently required for pilots and air traffic controllers will have to be demonstrated based on the ICAO holistic descriptors and language proficiency rating scale (at Level 4 or above). Additionally, since November 2003, Annex 10 has required the availability of English language at all stations on the ground serving designated airports and routes used by international air services.

1.2   Several States have invested considerable resources and efforts to comply with the provisions by 5 March 2008. While some States may not be compliant by March 2008, the applicability date establishes a milestone that helps to retain the focus required to implement the safety Standards related to language proficiency as soon as practicable.

1.3   On 27 June 2007, the Council at the 18th meeting of its 181st Session, considered the consequence of non-compliance including the impact on multilateral recognition of pilots' licences provided for under Article 33 of the *Convention on International Civil Aviation* (Doc 7300) when a State is unable to meet the minimum Standards prescribed in Annex 1.

1.4   The Council proposed and the Assembly adopted Resolution A36-11 on Proficiency in the English language used for radiotelephony communications which urges Contracting States that are not in a position to comply with the language proficiency requirements by the applicability date to post their language proficiency implementation plans including their interim measures to mitigate risk.

2.   **SCOPE**

2.1   The intent of the implementation plan is to provide a means of communicating the steps that your State will take to meet the language proficiency requirements and mitigate risks during a transition period from the applicability date of 5 March 2008 to 5 March 2011. States that will comply by 5 March 2008 should advise ICAO that they will do so and need not prepare an implementation plan. A language proficiency implementation plan should consist of the following components:

      a) regulatory framework to support the implementation of the requirements;

      b) estimate of national level of implementation;

      c) language proficiency training programmes;

      d) language proficiency assessment plan for licensing purposes; and

e)   interim measures to mitigate risks.

2.2   Each Contracting State that will not be compliant by 5 March 2008 should provide their plans to ICAO for posting on the Flight Information Exchange Website (FSIX) as early as possible but no later than 5 March 2008. In this way, all other States will be aware of their implementation plans and can make informed decisions.

3.   **CONTENT OF THE REGULATORY FRAMEWORK**

3.1   A regulatory framework is essential to support the implementation of the language proficiency requirements. States that do not have a regulatory framework in place should establish a plan to enact the necessary framework on a timely basis. The regulatory framework could consist of a combination of legislation, regulations or other documentary evidence (e.g. orders, advisory circulars) that a State Civil Aviation Authority deems would be sufficient to implement and enforce the language proficiency requirements. States can use the table below to document their regulatory framework or their plan to develop a regulatory framework. When the regulatory framework has already been established, a reference number to the applicable national provisions should be provided. When the national provisions have not yet been modified, the type of provisions envisaged should be indicated, as well as the date the provision is expected to be in place.

3.2   Beyond the establishment of a regulatory framework for the language requirements, Civil Aviation Authorities (CAAs) are responsible for the oversight of language proficiency assessments when issuing licenses or rendering valid licenses issued in other States. They should ensure that language assessments required for licensing purposes are conducted in a manner that provides valid and reliable results concerning the level of proficiency of the prospective licence holder. CAAs should develop procedures to collect and analyze language test/assessment results and analyze the safety occurrence reporting system, as well as any other safety data, as regards language proficiency.

3.3   A CAA staff member should be nominated as a focal point for each State as regards the implementation of language proficiency requirements. The focal point would:

a)   collect all the necessary information to complete the implementation plan;

b)   post the implementation plan with ICAO;

c)   assist in notifying a difference to ICAO and updating the AIP as necessary;

d)   liaise with ICAO and other Contracting States requesting information on the national implementation plan;

e)   liaise regularly with national airlines and service providers, language testing and training organizations, pilots and controllers, and any other stakeholder involved in the implementation of language proficiency requirements within the State;

f)   report any discrepancy or slippage of the implementation plan with the accountable managers and the appropriate authority; and

g)   amend the implementation plan as progress towards full compliance is achieved.

3.4　　　　　The name, title and contact details of the focal point should be provided in the plan.

Table 1 – National Regulatory Framework

Focal Point Information			
Name			
Title			
Organization			
Telephone			
Fax			
E-mail			
		Compliance	
Standards and Recommended Practices (SARPs)	**Yes**, the regulatory framework is in place. *Indicate Reference*	The regulatory framework is **partially** in place. *Briefly describe what is in place, remaining work and expected date of completion*	**No**, the national regulatory framework has not yet been established. *Indicate the type of provision envisaged and the expected date of introduction*
Annex 1	1.2.9.1			
	1.2.9.2			
	1.2.9.4, Appendix 1, Attachment A			
	1.2.9.6			
	1.2.9.7 (Recommended Practice)			
	5.1.1.2 XIII)			
Annex 6	Part I – 3.1.8			
	Part III – 1.1.3			
Annex 10, Volume II	5.1.1.1			
	5.2.1.2.1			
	5.2.1.2.2			
	5.2.1.2.3			
Annex 11	2.29.1			
	2.29.2			

4.　　ESTIMATE OF NATIONAL LEVEL OF IMPLEMENTATION

4.1　　　　　In order to describe the degree of implementation of language proficiency requirements, the plan should provide an estimate, or snapshot, of the existing level of the proficiency of their pilots, controllers involved in international operations. This estimate should be revised at regular intervals and not less than once a year. The implementation plan should be updated with ICAO accordingly.

4.2　　　　　States, with the assistance of operators and service providers, should determine the number of pilots and controllers that are involved in international operations. Within these figures, the

following information would be required: the number of pilots holding ATPL, MPL, CPL and PPL and the number of controllers working in aerodrome, approach and area control facilities. These numbers should be further broken down into levels of language proficiency in accordance with the ICAO rating scale and included in the implementation plan using the table below.

4.3   The language proficiency requirements will be implemented to varying degrees in those States that will not be compliant by 5 March 2008: from minimal implementation activities to nearly full compliance. Thus, some States may not have developed or acquired a capability to determine the level of language proficiency of their personnel using assessment best practices. Those States should provide estimates, to the best of their capability, and update their numbers as their capacity to assess language proficiency in accordance with the ICAO Rating Scale is developed or acquired.   If training programmes have been established, estimates based on training assessments may be provided. Other States may have begun to conduct tests and assessments for licensing purposes and would be in a position to confirm a level of proficiency for some of their personnel. In all cases, the manner in which the level of proficiency was estimated should be described (e.g. diagnostic tests, interviews, sampling, personnel linguistic history, licensing tests, etc.).

Table 2 – Estimate of National Level of Implementation

Date:				
Pilots involved in international operations	**ATPL**	**CPL**	**MPL**	**Method of Assessment of Level of Proficiency**
Level 3 and below				
Level 4				
Level 5				
Level 6				
PPL				
Date:				
Indicate number of PPLs involved in international operations		Briefly described the method of Assessment of Level of Proficiency		

Date:					
Controllers involved in international operations	**Aerodrome**	**Approach**	**Area**	**Student**	**Method of Assessment of Level of Proficiency**
Level 3 and below					
Level 4					
Level 5					
Level 6					

5. LANGUAGE PROFICIENCY TRAINING PROGRAMMES

5.1   Language proficiency training programmes are an essential component towards ensuring that personnel achieve and maintain ICAO Operational Level 4 in many States. States should ensure that training is appropriate, effective and efficient through oversight of training providers. Language training programmes can be developed within the resources of a State, air operator or air navigation service provider, or procured through private organizations. In any case, language training providers should ensure that the programmes address the holistic descriptors of Annex 1, Appendix 1, the ICAO rating scale and use language training best practices as described in ICAO *Manual on the Implementation of ICAO Language Proficiency Requirements* (Doc 9835).

5.2   States should use the table below to describe their existing and planned training programmes.

Table 3 – Language Proficiency Training Programmes

State oversight of aviation language training has been established. Yes ❑ No ❑	If no, expected date of establishment:
Language Training will be provided through: (Check all that apply)	
Air Navigation Service Provider	
Air Operator/Airline	
Educational Institutions	
Private organizations	

6. LANGUAGE PROFICIENCY ASSESSMENT (OR TESTING) FOR LICENSING PURPOSES

6.1   The high stakes of language proficiency assessments (also referred to as tests) for licensing purposes are well recognized. Chapter 6 of Document 9835 provides more detailed information on the impact and requirements of these tests. These requirements apply whether all or part of the assessment process is established within the resources of a State, air operator or air navigation service provider, or procured through a private organization. States should therefore include information in their implementation plan concerning the process they have, or will be using for the initial and recurrent licensing assessments.

6.2   The following information concerning initial and recurrent proficiency assessments for licensing purposes for pilots and controllers should be provided in the implementation plan.

Table 4 – Language Proficiency Assessment (or Testing) for Licensing Purposes

State oversight of aviation language assessment has been established.	Yes ❑ No ❑	If no, expected date of establishment:

Pilots	
The Language Proficiency Assessment was/is/will be developed by:	
Civil Aviation Authority	
Air Operator	
Educational Institution	

Private Organization *Optionally, indicate the private organization used*	
The Language Proficiency Assessment was/is/will be administered by:	
Civil Aviation Authority	
Air Operator	
Educational Institution	
Private Organization *Optionally, indicate the private organization used*	

Controllers	
The Language Proficiency Assessment was/is/will be developed by:	
Civil Aviation Authority	
Air Navigation Service Provider	
Educational Institution	
Private Organization *Optionally, indicate the private organization used*	
The Language Proficiency Assessment was/is/will be administered by:	
Civil Aviation Authority	
Air Navigation Service Provider	
Educational Institution	
Private Organization *Optionally, indicate the private organization used*	

7.   INTERIM MEASURES TO MITIGATE THE RISK

7.1   States that are not in a position to comply with the language proficiency requirement by the applicability date should provide information on the interim risk mitigating measures they will introduce until they achieve compliance in March 2011. All States will need this information to carry out a risk analysis to ensure that the lack of language proficiency is minimized as a potential cause of accidents and incidents.

7.2   States should develop interim measures based on the identification of hazards and risks associated with non- or partial compliance with the language proficiency requirements. A hazard is any situation or condition that has the potential to cause adverse consequences and a risk is the assessed potential for adverse consequences resulting from a hazard. Risk mitigating measures can then be identified.

7.3   Risk mitigating measures should be carefully evaluated to ensure that they do not introduce additional risks and that they are appropriate to organizational and national circumstances. Therefore the prescription of universally applicable risk mitigating measures for the progressive implementation of language proficiency requirements is impractical. States are encouraged to apply the procedures outlined in the ICAO Safety Management Systems training course (http://www.icao.int/anb/safetymanagement) and the *Safety Management Manual (SMM)* (Doc 9859) to determine mitigating measures that are the most suitable to them.

7.4   States should document in their implementation plan the mitigating measures that will be introduced until compliance is achieved in March 2011 using the table below.

Table 5 – Interim Measures to Mitigate the Risk

Pilots (international operations)	2008	2009	2010
Commercial multi-pilot operations			
General aviation multi-pilot operations			
Commercial single-pilot operations			
General aviation single-pilot operations			
Controllers			
Aeronautical Station Operators			

7.5   In developing potential risk mitigating measures, States can prioritize the steps of their implementation plan considering the most urgent need in terms of safety for commercial operations involved in international operations and those involving general aviation operating under VFR in low density airspace. Implementation plans should examine the risks involved and could prioritize using a phased in compliance until March 2011.

8.   **POSTING THE PLAN AND NOTIFYING ICAO**

8.1   Instructions on how States can post their implementation plan can be found on the ICAO Flight Safety Information Exchange (FSIX) Website at http://www.icao.int/fsix/. States may chose to provide a link to a national website where the implementation plan is located or provide ICAO with a PDF file. To facilitate the development of an implementation plan, all of the tables in this document have been compiled and can be found on the FSIX website.

8.2   Implementation plans will be posted in the language in which they are provided. When the implementation plan is provided in a language other than English, States are strongly encouraged to provide an English translation. Please note that implementation plans posted on the FSIX website have not been reviewed or approved by ICAO.

9.   **NOTIFICATION OF DIFFERENCE**

9.1   The implementation plan should also include the required filing of differences pursuant to Article 38 of the Convention. A form of notification of differences to language provisions can be found in Attachment C and should be forwarded to ICAO as part of the implementation plan unless the State has already notified ICAO of such difference. A note on the notification of differences can be found on the FSIX website (http://www.icao.int/fsix/). States are reminded that they should document in the AIP any significant difference on language proficiency.

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**NOTIFICATION OF COMPLIANCE WITH OR
DIFFERENCES FROM LANGUAGE PROVISIONS IN
ANNEXES 1, 6, 10 AND 11**

(Reference to Table 1, paragraph 3, Attachment B)

To: The Secretary General
International Civil Aviation Organization
999 University Street
Montreal, Quebec
Canada H3C 5H7

1.   No differences will exist on ——————————————————— between the national regulations and/or practices of **(State)** ——————————————————— and the language provisions as detailed in Table 1, paragraph 3 of Attachment B of this State letter.

2.   The following differences will exist on ——————————————————— between the regulations and/or practices of **(State)** ——————————————————— and the provisions the language provisions as detailed in Table 1, paragraph 3 of Attachment B of this State letter. (Please see Note 3) below.)

a)	Annex Provision	b)	Difference Category	c)	Details of Difference	d)	Remarks
	(Please give exact paragraph reference)		(Please indicate A, B, or C)		(Please describe the difference clearly and concisely)		(Please indicate reasons for the difference)

(Please use extra sheets as required)

3.   By the dates indicated below,

(State) ———————————————————— will have complied with the language provisions as detailed in Table 1, paragraph 3 of Attachment B of this State letter for which differences have been notified in 2 above.

a)	**Annex Provision**	**b)**	**Date**	**c)**	**Comments**
	(Please give exact paragraph reference)				

(Please use extra sheets as required)

Signature ————————————————————

Date   ————————————————————

NOTES

1) If paragraph 1 above is applicable to you, please complete paragraph 1 and return this form to ICAO Headquarters. If paragraph 2 is applicable to you, please complete paragraphs 2 and 3 and return the form to ICAO Headquarters.

2) Please dispatch the form to reach ICAO Headquarters as soon as possible but prior to 5 March 2008.

3) A detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.

4) Guidance on the notification of differences from language provisions is provided in the Note on the Notification of Differences at http://www.icao.int/fsix/.

5) Please send a copy of this notification to the ICAO Regional Director accredited to your Government.

— END —