

# RST Tools and Resources

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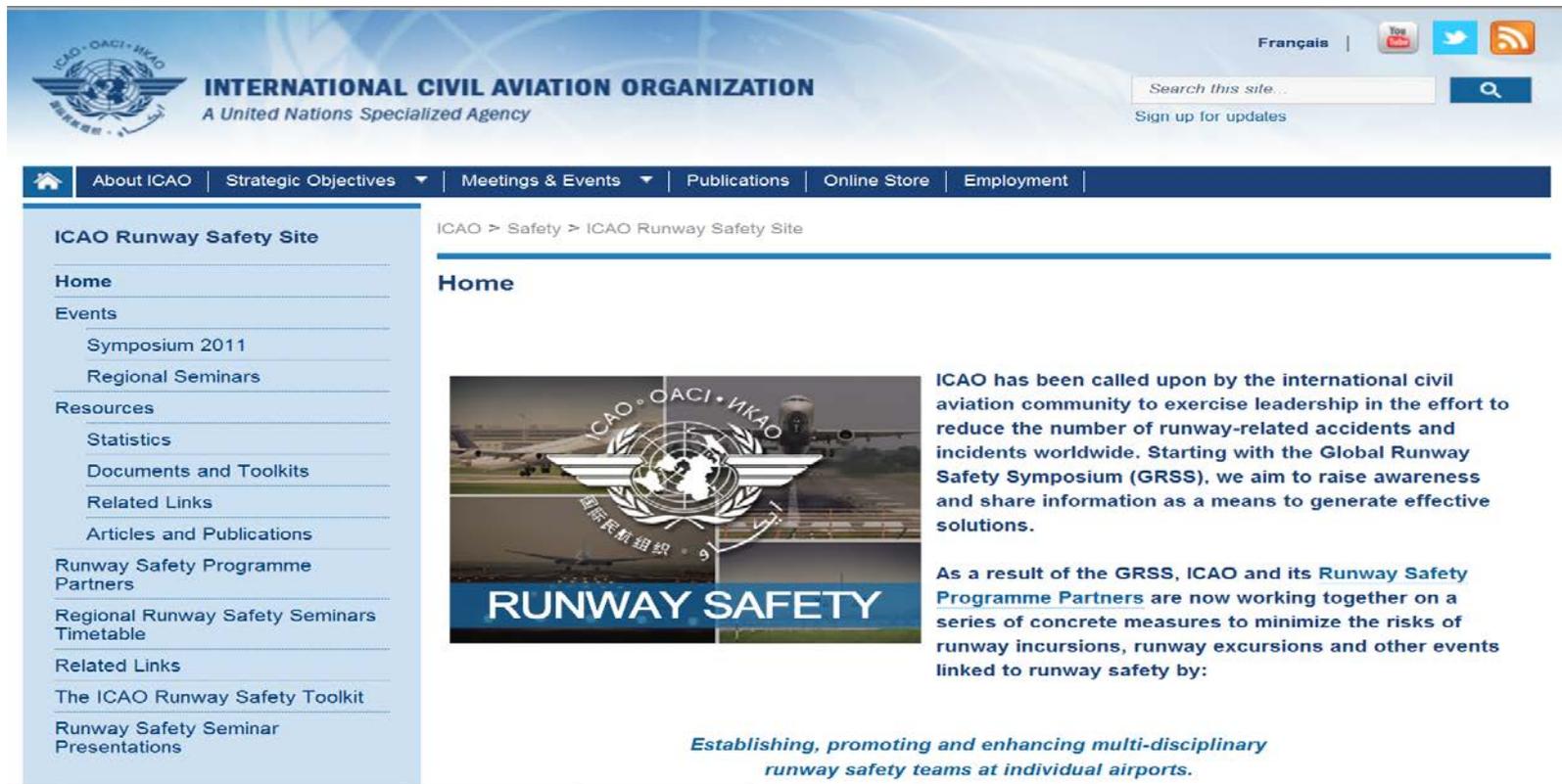
Session 8

Presentation 1



# ICAO Runway Safety Website

<http://www.icao.int/safety/runwaysafety>



The screenshot shows the ICAO Runway Safety Website interface. At the top, the ICAO logo and name are displayed, along with the text "INTERNATIONAL CIVIL AVIATION ORGANIZATION" and "A United Nations Specialized Agency". There are links for "Français", social media icons (YouTube, Twitter, RSS), and a search bar. A navigation menu includes "About ICAO", "Strategic Objectives", "Meetings & Events", "Publications", "Online Store", and "Employment". The main content area features a "Home" section with a large image of the ICAO logo and the text "RUNWAY SAFETY". To the right of the image, there is a paragraph of text and a sub-section titled "As a result of the GRSS, ICAO and its Runway Safety Programme Partners are now working together on a series of concrete measures to minimize the risks of runway incursions, runway excursions and other events linked to runway safety by:". Below this, there is a quote: "Establishing, promoting and enhancing multi-disciplinary runway safety teams at individual airports."

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ICAO Runway Safety Site

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ICAO Runway Safety Site

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ICAO has been called upon by the international civil aviation community to exercise leadership in the effort to reduce the number of runway-related accidents and incidents worldwide. Starting with the Global Runway Safety Symposium (GRSS), we aim to raise awareness and share information as a means to generate effective solutions.

As a result of the GRSS, ICAO and its Runway Safety Programme Partners are now working together on a series of concrete measures to minimize the risks of runway incursions, runway excursions and other events linked to runway safety by:

*Establishing, promoting and enhancing multi-disciplinary runway safety teams at individual airports.*

# Draft RST Handbook



**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
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Français |   

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## Documents and Toolkits

This page shows the different Runway Safety related documents and toolkits that ICAO and its Runway Safety Programme Partners have published. To download a specific document, locate the "Download" column and click on the "Click here" hyperlink.

| Icon  | Title                       | Author(s) | Revision           | Download                      |
|---|-----------------------------|-----------|--------------------|-------------------------------|
| <input type="checkbox"/> <b>Scope : General (2)</b>                                 |                             |           |                    |                               |
|  | Runway Safety Team Handbook | ICAO      | Draft - April 2013 | <a href="#">Download here</a> |

# Managing the work of the RST

## What needs to be managed?

- Hazard identification
- Risk management
- Mitigation strategies
- Work assignments
- Membership
- Collaboration

## Tools to facilitate

- Meetings
- On site observations
- IT collaboration tools
- HIRM tools
- “Runway safety management form”
- RST Handbook
- “International tool box”



# RST Tools

- Meetings (ref. *Draft RST Handbook, App B*)
  - Allow for information sharing
  - Allow for pro-active / predictive hazard identification
  - Allow for collaborative hazard identification and risk assessment to facilitate prioritization
  - Allow for collaborative agreement on mitigation strategies and action items
- Physical airport tours
  - Allow for follow-up on mitigation strategies
  - Allow for pro-active hazard identification
  - Allow for information sharing



# RST Tools

- **Action Items Guidance**

- Action items should be airport specific and linked to a runway safety concern, issue or problem.
- Consensus is required for assignment of an action item, in particular from the organization responsible for accomplishing the action.
- Acceptance of an action item is voluntary.
- Proposed action items where consensus is not reached may be documented as safety recommendations at the discretion of the RST Leader.

# RST Tools

- **IT collaboration tools (e.g. MS Sharepoint)**
  - Allow for information sharing
  - Allow for central storage of hazard register
  - Allow for follow-up and repository of mitigation strategies
- **ICAO HIRM template, software solutions**
  - Allow for formal hazard identification and risk management
  - Allow for formal identification of defenses and mitigations strategies

# International Toolbox

| TYPE                     | TITLE   | DATE                               | WEB LINK   | LANGUAGES                               |
|--------------------------|---|------------------------------------|--|---|
| Web site                 | Runway Safety   | Continuous                         | <a href="http://www.icao.int/safety/RunwaySafety/Pages/default.aspx">http://www.icao.int/safety/RunwaySafety/Pages/default.aspx</a>  | English                                 |
| Guidance Documents       | Manual on the Prevention of Runway Incursions   | 2007                               | <a href="http://www.icao.int/safety/RunwaySafety/Documents%20and%20Tools/ICAO_manual_prev_RI.pdf">http://www.icao.int/safety/RunwaySafety/Documents%20and%20Tools/ICAO_manual_prev_RI.pdf</a>  | English<br>French<br>Spanish<br>Russian |
|                          | Draft Runway Safety Team Handbook   | April 2013                         | <a href="http://www.icao.int/safety/RunwaySafety/Documents%20and%20Tools/EN.pdf">http://www.icao.int/safety/RunwaySafety/Documents%20and%20Tools/EN.pdf</a>  | English                                 |
| Training Material        | RRSS Presentations templates  | Continuous                         | <a href="http://www.icao.int/safety/RunwaySafety/RRSS%20Template%20Presentations/Forms/AllItems.aspx">http://www.icao.int/safety/RunwaySafety/RRSS%20Template%20Presentations/Forms/AllItems.aspx</a>  | English                                 |
| Events                   | ICAO/IATA/Eurocontrol EUR/NAT Regional Runway Safety Seminar (RRSS) - Istanbul, Turkey                                      | 6 to 8 November 2013               | <a href="http://www.icao.int/Meetings/TurkeyRRSS/Pages/default.aspx">http://www.icao.int/Meetings/TurkeyRRSS/Pages/default.aspx</a>  | English                                 |
|                          | Global Runway Safety Symposium  | 24 - 26 May 2011                   | <a href="http://www.icao.int/safety/RunwaySafety/GRSS2011/Pages/default.aspx">http://www.icao.int/safety/RunwaySafety/GRSS2011/Pages/default.aspx</a>  | English                                 |
| Toolkits                 | Runway Safety Toolkit   | 2005                               | <a href="http://www.icao.int/safety/RunwaySafety/Pages/RnwyTlkt.aspx">http://www.icao.int/safety/RunwaySafety/Pages/RnwyTlkt.aspx</a>  | English                                 |
|                          | Runway Excursion Risk Reduction Toolkit   | May 2011 (2 <sup>nd</sup> Edition) | <a href="http://www.icao.int/safety/RunwaySafety/Pages/Toolkits.aspx">http://www.icao.int/safety/RunwaySafety/Pages/Toolkits.aspx</a><br><a href="http://www.iata.org/publications/Pages/runway-toolkit.aspx">http://www.iata.org/publications/Pages/runway-toolkit.aspx</a>   | English                                 |
| Awareness communications | Article in ICAO Journal   | TBD 2013                           | <a href="http://www.icao.int/publications/Pages/ICAO-Journal.aspx?year=2013&amp;lang=en">http://www.icao.int/publications/Pages/ICAO-Journal.aspx?year=2013&amp;lang=en</a>  | English                                 |
|                          | Runway safety related Flyers (Prevention Measures, Runway Surface Condition, Runway End Safety Areas and Arresting Systems) | Various                            | <a href="http://www.icao.int/safety/RunwaySafety/Pages/Publications.aspx">http://www.icao.int/safety/RunwaySafety/Pages/Publications.aspx</a>  | English                                 |
|                          | Banner  | 2013                               |  | English                                 |
| Other                    | RRSS Feedback Form  | 2013                               | <a href="http://www.icao.int/safety/RunwaySafety/Pages/default.aspx">http://www.icao.int/safety/RunwaySafety/Pages/default.aspx</a>  | English<br>Spanish                      |
|                          | Runway Safety Team Survey   | 2013                               | <a href="http://www.icao.int/safety/RunwaySafety/Pages/default.aspx">http://www.icao.int/safety/RunwaySafety/Pages/default.aspx</a><br><a href="http://www.icao.int/safety/RunwaySafety/SitePages/Runway%20Safety%20Survey%20Results.aspx">http://www.icao.int/safety/RunwaySafety/SitePages/Runway%20Safety%20Survey%20Results.aspx</a> | English                                 |

# IATA Runway Safety Products

| TYPE        | TITLE                           | DATE      | WEB LINK  |
|-------------|---------------------------------|-----------|---|
| Toolkit     | RERR 2 <sup>nd</sup> edition    | May 2011  | <a href="http://www.iata.org/publications/Pages/runway-toolkit.aspx">http://www.iata.org/publications/Pages/runway-toolkit.aspx</a> |
| Publication | Pilot/ATC<br>Phraseology Report | June 2012 | <a href="http://www.iata.org/publications/Pages/phraseology.aspx">http://www.iata.org/publications/Pages/phraseology.aspx</a>       |



# ACI Runway Safety Products

- Airside Safety Handbook and Wildlife Management Handbook
  - [www.aci.aero/Publications/SafetyOperations](http://www.aci.aero/Publications/SafetyOperations)
- New Runway Safety Handbook which will contain best practices for airport operators
- Training courses for airport operators, related to safety
  - [www.aci.aero/Global-Training/Training-Information/Course-Categories/Safety](http://www.aci.aero/Global-Training/Training-Information/Course-Categories/Safety)

# CANSO Runway Safety Products

| TYPE                     | TITLE  | DATE                    | WEB LINK  |
|--------------------------|--|-------------------------|---|
| Educational booklet      | Unstable Approaches:<br>Air Traffic Control<br>Considerations        | June 2013<br>(re-issue) | <a href="http://www.canso.org/safety">http://www.canso.org/safety</a> |
| Web / Mobile application | Runway Safety Mobile Application                                     | June 2013               | <a href="http://www.cansosafety.com/">http://www.cansosafety.com/</a> |
| Flyer                    | Runway Excursions: An ATC<br>Perspective on Unstable<br>Approaches   | June 2013               | <a href="http://www.canso.org/safety">http://www.canso.org/safety</a> |
| Flyer                    | Avoiding Unstable Approaches:<br>Important Tips for ATCOs and Pilots | June 2013               | <a href="http://www.canso.org/safety">http://www.canso.org/safety</a> |
| Flyer                    | Runway Safety Maturity Checklist                                     | June 2013               | <a href="http://www.canso.org/safety">http://www.canso.org/safety</a> |

# IFALPA Runway Safety Products

- ➔ Runway Safety Manual
- ➔ <http://www.ifalpa.org/publications/briefing-leaflets/airport-issues.html>



# FSF Runway Safety Products

- Approach and Landing Accident Reduction (ALAR) toolkit
  - <http://flightsafety.org/current-safety-initiatives/approach-and-landing-accident-reduction-alar/alar-tool-kit-cd>
- FSF Report on the Runway Safety Initiative
  - <http://www.skybrary.aero/bookshelf/books/900.pdf>
- Studies and articles published by FSF
  - <http://flightsafety.org/current-safety-initiatives>

# Eurocontrol Runway Safety Products

- Skybrary portals for Runway Incursions and Excursions
  - [http://www.skybrary.aero/index.php/Portal:Runway\\_Incursion](http://www.skybrary.aero/index.php/Portal:Runway_Incursion)
  - [http://www.skybrary.aero/index.php/Portal:Runway\\_Excursion](http://www.skybrary.aero/index.php/Portal:Runway_Excursion)
- CANSO and partners information flyers etc.
  - [http://www.skybrary.aero/index.php/Stabilised\\_Approach](http://www.skybrary.aero/index.php/Stabilised_Approach)
- Runway Safety Maturity Checklist - a product developed by CANSO (still validating product)
  - [http://www.skybrary.aero/index.php/Local\\_Runway\\_Safety\\_Teams\\_%28LRST%29](http://www.skybrary.aero/index.php/Local_Runway_Safety_Teams_%28LRST%29)
  - [http://www.skybrary.aero/index.php/ICAO\\_Runway\\_Safety\\_Toolkit](http://www.skybrary.aero/index.php/ICAO_Runway_Safety_Toolkit)
  - <http://www.skybrary.aero/bookshelf/content/bookDetails.php?bookId=2261>
  - <http://www.skybrary.aero/bookshelf/books/2260.pdf>

# FAA Runway Safety Products

| TYPE         | TITLE  | WEB LINK  |   |
|--------------|--|---|---|
| Web site     | Runway Safety  | <a href="http://www.faa.gov/airports/runway_safety/">http://www.faa.gov/airports/runway_safety/</a>                           |   |
| Publications | Runway Safety: A Best Practices Guide to Operations and Communications | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | FAA Guide to Ground Vehicle Operations                                 | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Ground Vehicle Airport Signs & Markings Dashboard Sticker              | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Pilot's Guide to Airport Signs and Markings Drilled Card               | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Pilot and Flight Crew Taxi Procedures at Towered Airports Drilled Card | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Do You Know Signs and Markings? Quiz                                   | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Airport Signs and Markings Flash Cards                                 | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Focus on Hot Spots Flyer   | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Taxi Clearance Post-It Pads  | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Light Gun Signals for Pilots Sticker                                   | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Enhanced Taxiway Centerline Flyer and Poster                           | <a href="http://www.faa.gov/airports/runway_safety/publications/">http://www.faa.gov/airports/runway_safety/publications/</a> |   |
|              | Toolkits   | Runway Safety Action Team (RSAT) Toolkit  | <a href="http://www.faa.gov/airports/runway_safety/resources/lrsat/">http://www.faa.gov/airports/runway_safety/resources/lrsat/</a> |

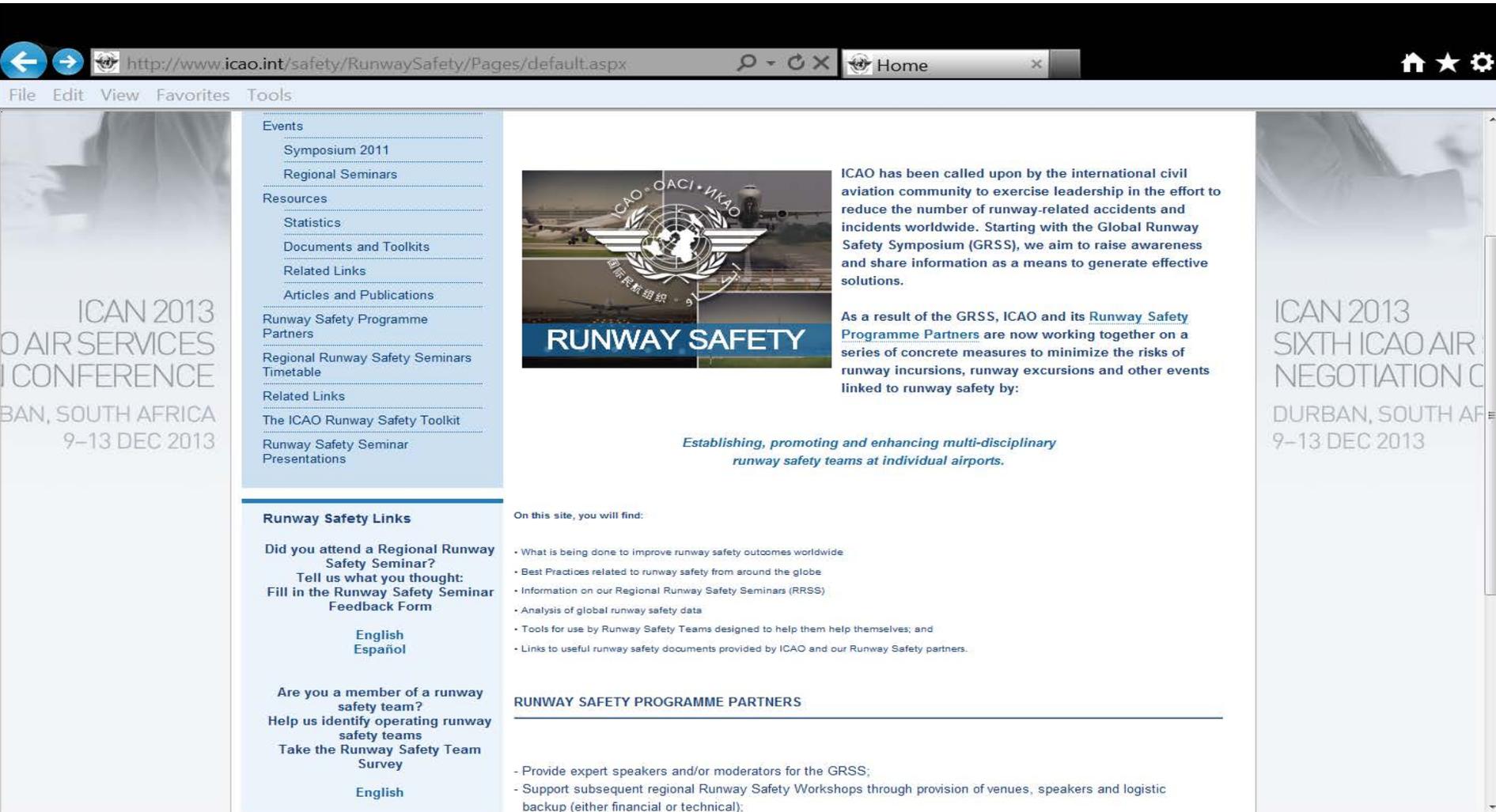
# RST Tools

## • Runway safety management form (Draft RST Manual, App F)

- Allow for simplified recording of HIRM process
- Allow for recording and tracking of corrective action plans
- Allow for assignment of responsibility

| RUNWAY SAFETY MANAGEMENT FORM  |  |  |  |          |            |                      |
|--|--|--|--|----------|------------|----------------------|
| Runway Safety Management Form  |  |  |  |          |            |                      |
| Reference:   | Date Opened dd/mm/yy   | Date Closed dd/mm/yy                                 |  |          |            |                      |
| General Information  |  |  |  |          |            |                      |
| Airport:   | What area is affected: runway taxiway ramp general             |  |  |          |            |                      |
| Specific Identifier (runway/taxiway identifier):   |  |  |  |          |            |                      |
| Safety Outcomes  |  |  |  |          |            |                      |
| Safety Risk Type:  | <input type="checkbox"/> runway excursion                      | <input type="checkbox"/> runway incursion - aircraft | <input type="checkbox"/> wildlife encounter                                  |          |            |                      |
|  | <input type="checkbox"/> abnormal landing                      | <input type="checkbox"/> runway incursion - vehicle  | <input type="checkbox"/> birdstrike <input type="checkbox"/> other (specify) |          |            |                      |
| Has an event occurred, or is this a hazard (potential outcome):  | <input type="checkbox"/> actual outcome (event occurred)       | occurrence date                                      | dd/mm/yy   |          |            |                      |
|  | <input type="checkbox"/> potential outcome (no event occurred) |  |  |          |            |                      |
| Description of actual or potential outcome   |  |  |  |          |            |                      |
| Supporting Document Type: <input type="checkbox"/> accident report <input type="checkbox"/> incident report <input type="checkbox"/> audit report <input type="checkbox"/> other (specify)   |  |  |  |          |            |                      |
| Safety Issues  |  |  |  |          |            |                      |
| <input type="checkbox"/> Navigation Aids   | <input type="checkbox"/> Meteorological                        | <input type="checkbox"/> Approach Vectoring          | <input type="checkbox"/> Other   |          |            |                      |
| <input type="checkbox"/> Runway/Taxiway Marking  | <input type="checkbox"/> Obstacles                             | <input type="checkbox"/> Runway Surface Condition    |  |          |            |                      |
| <input type="checkbox"/> VASI / PAPI   | <input type="checkbox"/> Approach lights                       | <input type="checkbox"/> Airport Construction        |  |          |            |                      |
| <input type="checkbox"/> Communications  | <input type="checkbox"/> Runway/Taxiway Lights                 | <input type="checkbox"/> Procedures                  |  |          |            |                      |
| Once you have completed the identification of the safety issues - please submit the form to log this report.<br>During the runway safety team meeting you should address each of the reports as an item on the agenda.<br>The following sections are provided as a tool to manage the outcomes of the meeting. |  |  |  |          |            |                      |
| Risk Assessment  |  |  |  |          |            |                      |
| (The risk assessment portion is to be completed as part of the runway safety team meeting)   |  |  |  |          |            |                      |
| What is the <b>Severity</b> of occurrence:   | Catastrophic Hazardous Major Minor Negligible                  |  |  |          |            |                      |
| What is the <b>Likelihood</b> of occurrence:   | Frequent Occasional Remote Improbable Extremely Improbable     |  |  |          |            |                      |
| <b>Risk Level</b> (from below risk table):   | High Moderate Low  |  |  |          |            |                      |
| If the risk level is Moderate or High, a corrective action plan is required  |  |  |  |          |            |                      |
| Consequence  | Probability  |  |  |          |            |                      |
|  |  | Frequent   | Occasional   | Remote   | Improbable | Extremely Improbable |
|  | Catastrophic   | High   | High   | High     | Moderate   | Moderate             |
|  | Hazardous  | High   | High   | Moderate | Moderate   | Moderate             |
|  | Major  | High   | Moderate   | Moderate | Moderate   | Low                  |
|  | Minor  | Moderate   | Moderate   | Moderate | Low        | Low                  |
| Negligible   | Low  | Low  | Low  | Low      | Low        |                      |
| Corrective Action Plan   |  |  |  |          |            |                      |
| (The corrective action plan is based on the recommendations of the Runway Safety Team and is to be completed as part of the Runway Safety Team meeting)  |  |  |  |          |            |                      |
| Action Plan Description:   |  |  |  |          |            |                      |
| Action Item Description:   |  |  |  |          |            |                      |
| Executing Body:  |  | Implementation date: dd/mm/yy                        |  | Status:  |            |                      |
| Action Plan Description:   |  |  |  |          |            |                      |
| Action Item Description:   |  |  |  |          |            |                      |
| Executing Body:  |  | Implementation date: dd/mm/yy                        |  | Status:  |            |                      |

# RRSS Feedback & RST Survey



The screenshot shows a web browser window displaying the ICAO Runway Safety website. The browser's address bar shows the URL: <http://www.icao.int/safety/RunwaySafety/Pages/default.aspx>. The website layout includes a navigation menu on the left, a central content area with a 'RUNWAY SAFETY' banner, and a right sidebar with event information.

**Left Sidebar:**

- Events
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**Central Content Area:**

**RUNWAY SAFETY**

ICAO has been called upon by the international civil aviation community to exercise leadership in the effort to reduce the number of runway-related accidents and incidents worldwide. Starting with the Global Runway Safety Symposium (GRSS), we aim to raise awareness and share information as a means to generate effective solutions.

As a result of the GRSS, ICAO and its [Runway Safety Programme Partners](#) are now working together on a series of concrete measures to minimize the risks of runway incursions, runway excursions and other events linked to runway safety by:

*Establishing, promoting and enhancing multi-disciplinary runway safety teams at individual airports.*

**On this site, you will find:**

- What is being done to improve runway safety outcomes worldwide
- Best Practices related to runway safety from around the globe
- Information on our Regional Runway Safety Seminars (RRSS)
- Analysis of global runway safety data
- Tools for use by Runway Safety Teams designed to help them help themselves; and
- Links to useful runway safety documents provided by ICAO and our Runway Safety partners.

**Runway Safety Links**

**Did you attend a Regional Runway Safety Seminar?**  
Tell us what you thought:  
**Fill in the Runway Safety Seminar Feedback Form**

English  
Español

**Are you a member of a runway safety team?**  
Help us identify operating runway safety teams  
Take the Runway Safety Team Survey

English

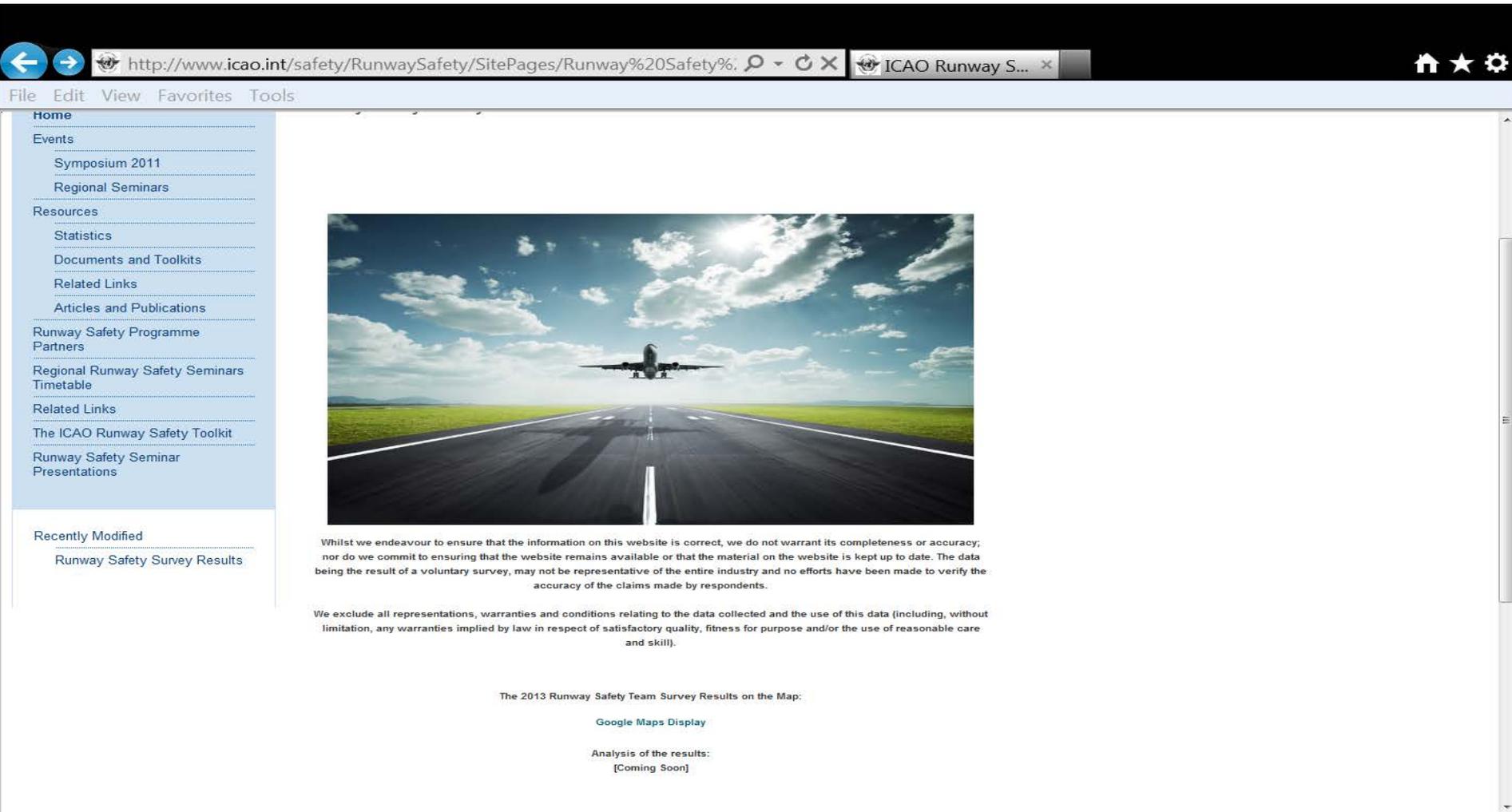
**RUNWAY SAFETY PROGRAMME PARTNERS**

- Provide expert speakers and/or moderators for the GRSS;
- Support subsequent regional Runway Safety Workshops through provision of venues, speakers and logistic backup (either financial or technical);

**Right Sidebar:**

ICAN 2013  
SIXTH ICAO AIR  
NEGOTIATION C  
DURBAN, SOUTH AF  
9-13 DEC 2013

# RST Survey Results



← → http://www.icao.int/safety/RunwaySafety/SitePages/Runway%20Safety% ICAO Runway S... ×

File Edit View Favorites Tools

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Recently Modified

- Runway Safety Survey Results



Whilst we endeavour to ensure that the information on this website is correct, we do not warrant its completeness or accuracy; nor do we commit to ensuring that the website remains available or that the material on the website is kept up to date. The data being the result of a voluntary survey, may not be representative of the entire industry and no efforts have been made to verify the accuracy of the claims made by respondents.

We exclude all representations, warranties and conditions relating to the data collected and the use of this data (including, without limitation, any warranties implied by law in respect of satisfactory quality, fitness for purpose and/or the use of reasonable care and skill).

The 2013 Runway Safety Team Survey Results on the Map:

[Google Maps Display](#)

Analysis of the results:  
[Coming Soon]



# RST Survey Results



# THANK YOU!

