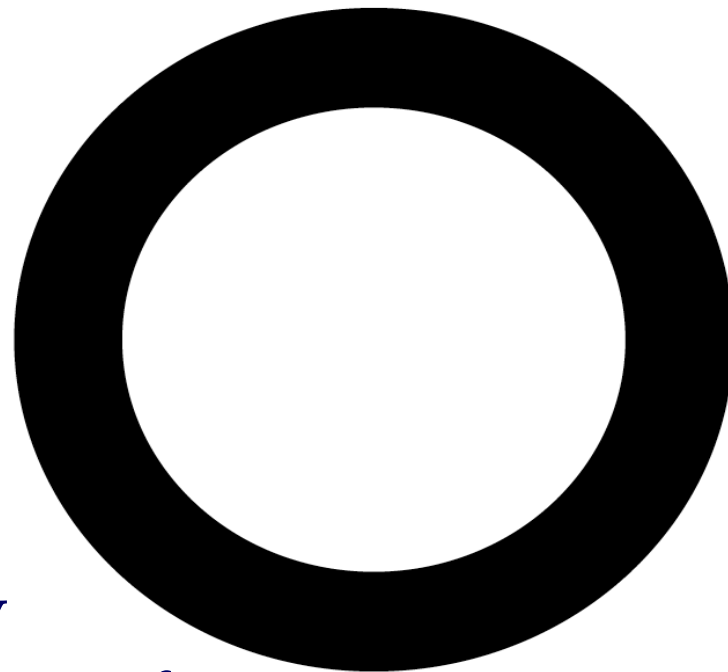




ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN



Eivind Grøv
Vice President of ITA
Research Manager SINTEF



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The vision of ITA

The vision of ITA
(from Strategy 2000) is
to be:

« the unquestioned
leader in the use of
subsurface space »



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

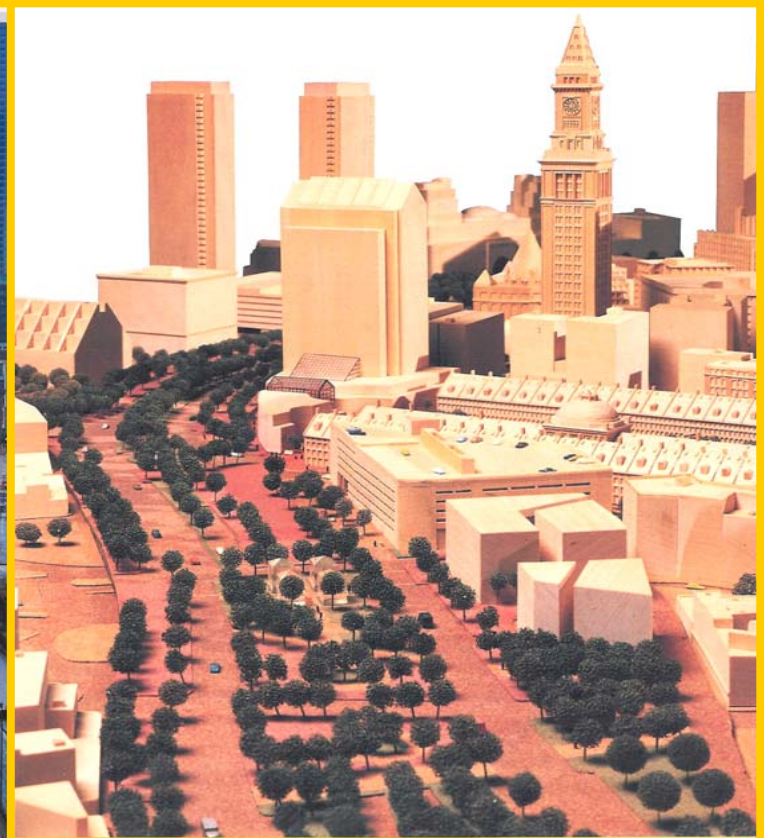
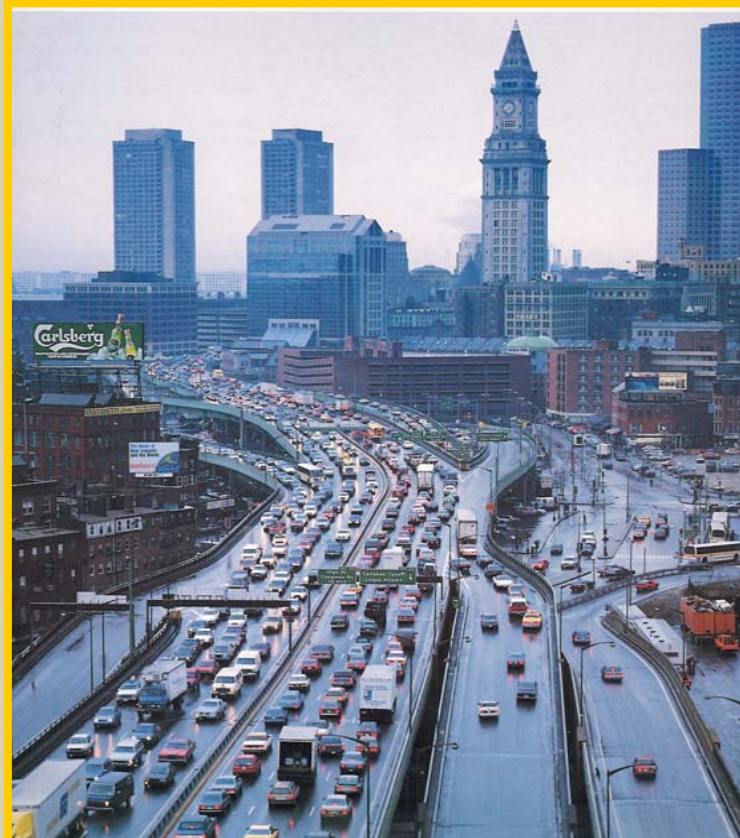
ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Why Go Underground ?

Central Artery- Boston (USA)

« City traffic tunnels clear vehicles from surface streets, traffic noise is reduced, air becomes less

polluted and the surface street areas may partially be used for other purposes »





ITA-AITES

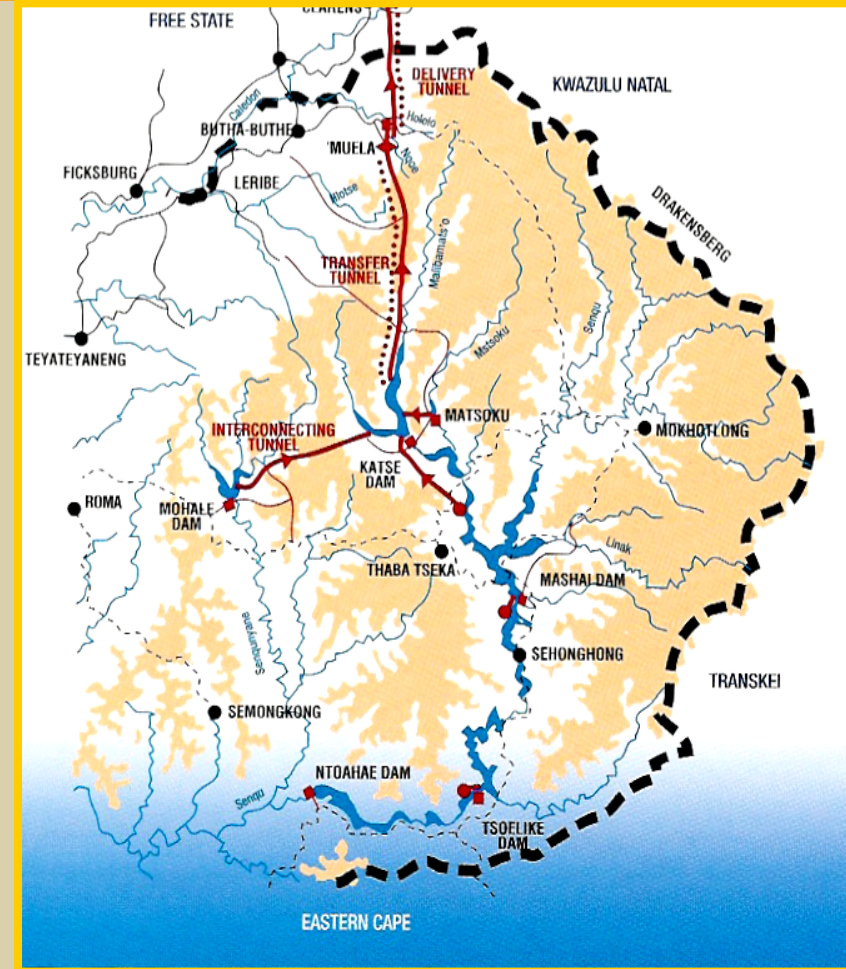
INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Why Go Underground ?

The Lesotho Highlands Water Project

« Tunnels play a vital environmental role by conveying clean water to and by conveying wastewater out from urban areas »





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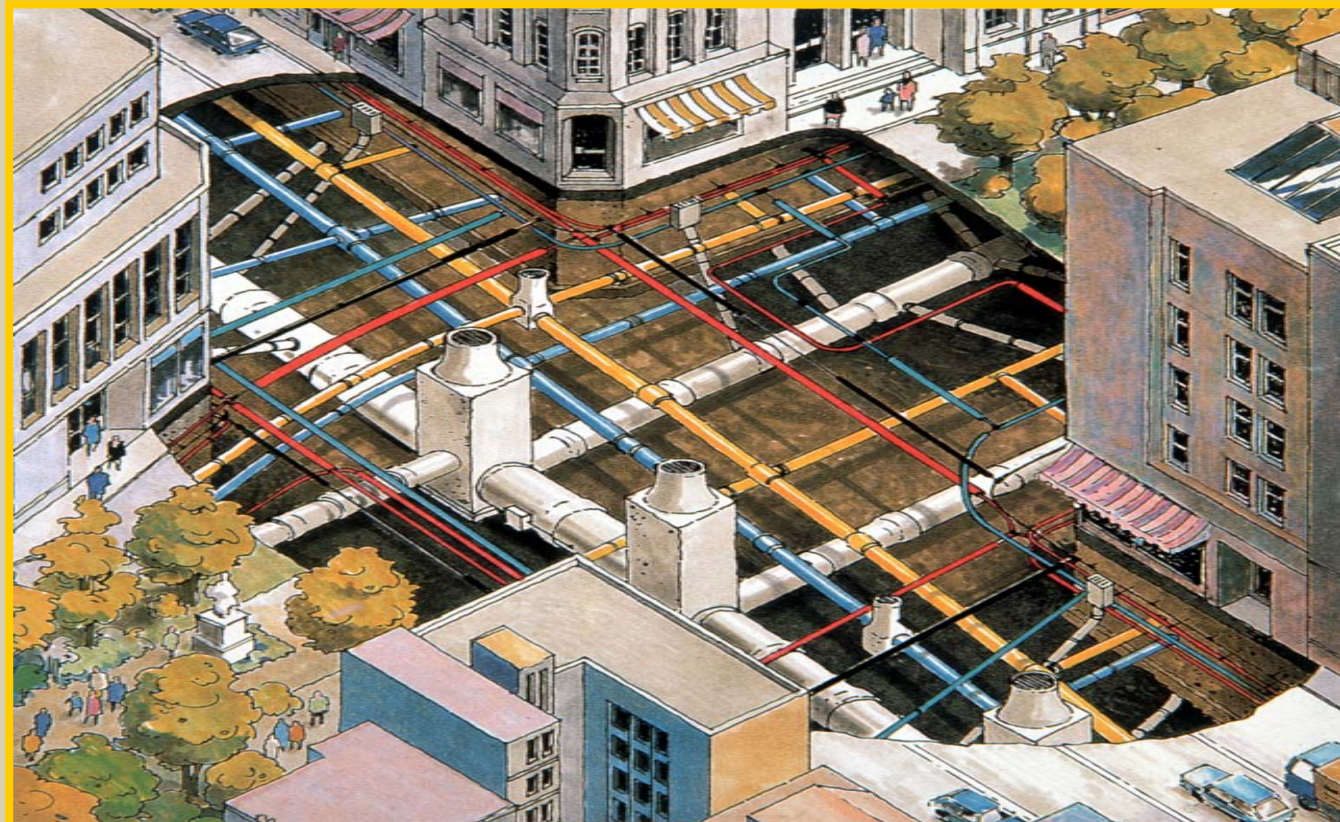
INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Why Go Underground ?

Variety of the underground infrastructure in a city

« *Utility tunnels to take care of underground infrastructure facilities* »



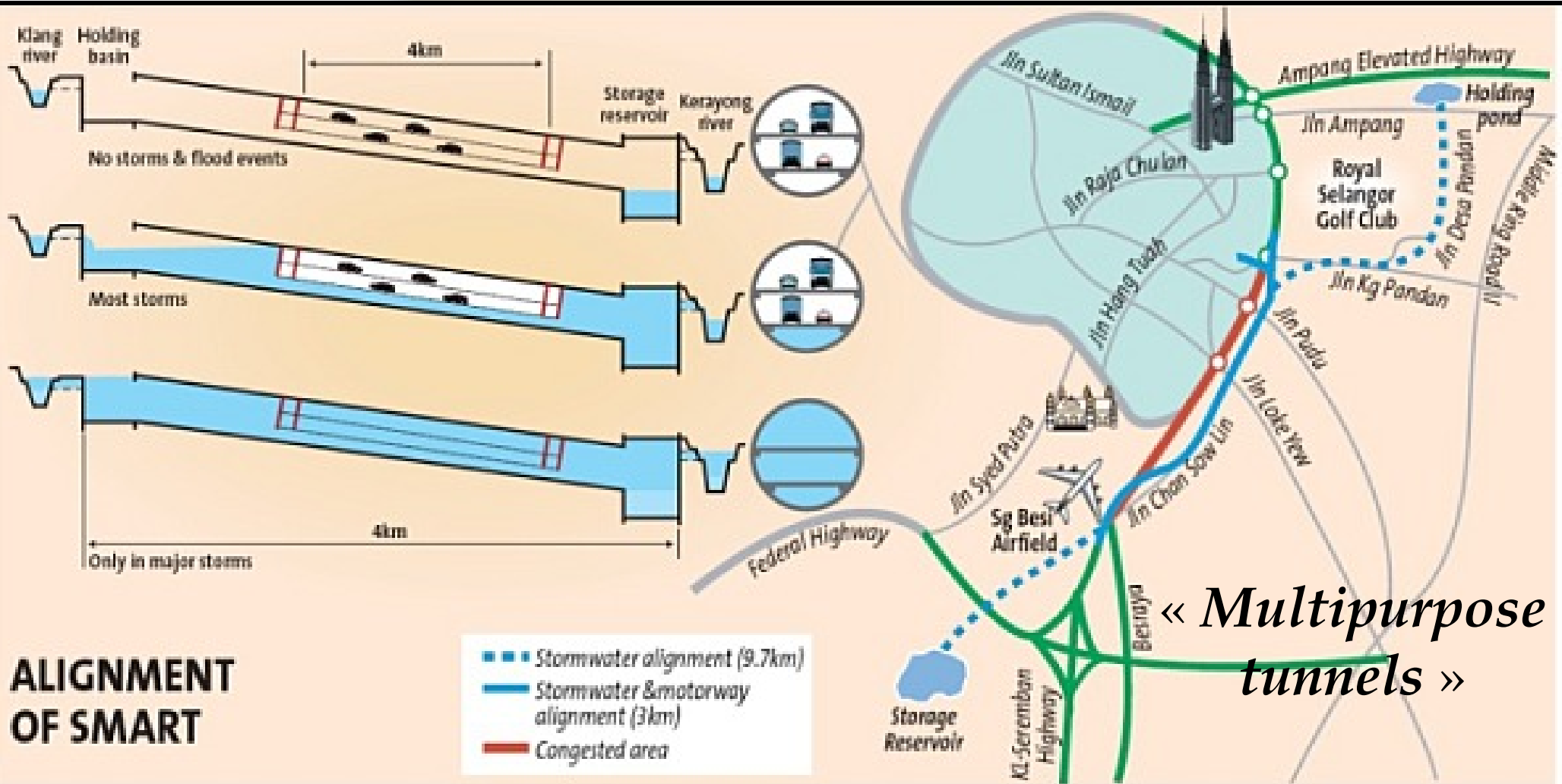
Why Go Underground ?



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ALIGNMENT OF SMART

- Stormwater alignment (9.7km)
- Stormwater & motorway alignment (3km)
- Congested area

« Multipurpose tunnels »



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Why Go Underground ?

Car park at the square Estienne d'Orves in Marseilles (France)

« Situation «before» and «after» the construction of the
underground car park »





Foundation & Development

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION
ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

WHAT IS ITA??

- Non-Profit and Non-Governmental Organization
- Founded in 1974, in Oslo
- Federation of Member nations: 54 (in 2008)
- Bi-lingual (English and French)
- Other nations represented by affiliate members:10 (in 2007)
- Corporate affiliate members: 140 (in 2007)
- Individual affiliate members: 144 (in 2007)
- 13 Prime Sponsors and 4 Supporters (in 2007)
- Potential of 20.000 individuals around the world
- Budget ca. 450' Euro, the rest is work "free of charge" e.g. participation in the Executive Council, "Heder og Ære"

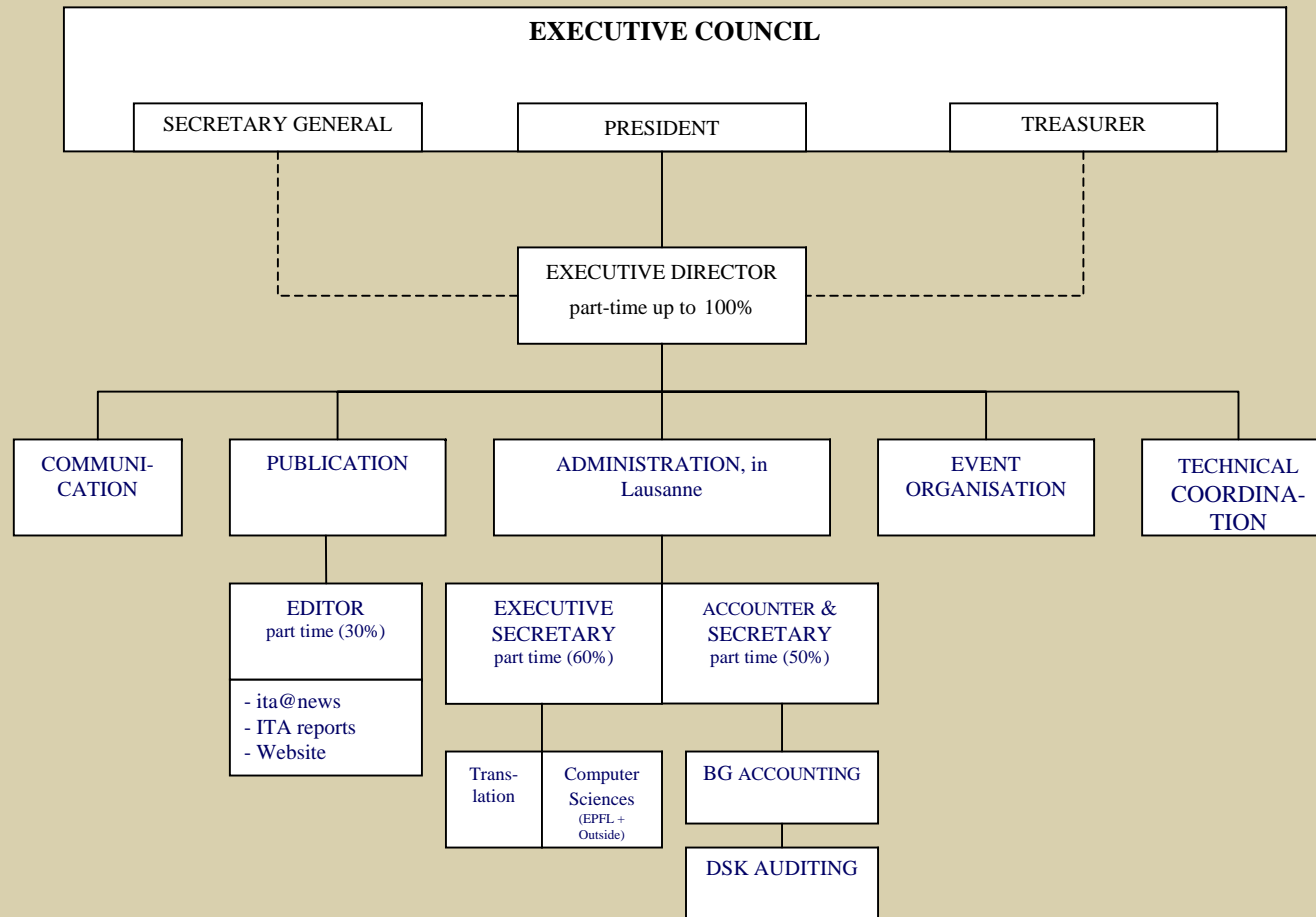


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INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

ORGANISATION CHART





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INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Circle of activities

1. COLLECT

- From/By WGs
- From WTC & Workshops
- From Training courses
- From University Network
- From Sister Organizations
- From Web

2. ORGANIZE/PROCESS

- By :
 - WGs
 - Task Forces
 - Committees
- Forum/Web
- Meetings

3. DISSEMINATE

- Web/WTC
- Meeting/Training/Workshops
- Publications
 - ITA@News
 - Tribune
 - WG documents
 - ITA Reports

Aims of the Association

- To encourage the use of the subsurface for benefit of the:
 - Public
 - Environment
 - Sustainable Development
- To promote advances in:
 - the preparatory investigations for tunnels
 - the design, construction, maintenance and safety of tunnels and underground space
- Oppfordre til bruk av undergrunnen til fordel for:
 - Publikum/storsamfunnet
 - Miljøet
 - Bærekraftig utvikling
- Promotere forbedringer innen:
 - De forberedende undersøkelser for tunnel og underjordprosjekter
 - Planlegging og prosjektering, bygging, vedlikehold og sikkerhet i tunneler og underjordsanlegg



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Goals and Challenges

- Increasing the awareness of public and of the decision-makers of the unique benefits of the underground, especially social and environmental benefits
- Managing and minimizing risk and assuring safety and security in all Tunnelling activities
- Embrace Sustainable Development
- Øke publikums og beslutningstakeres (planleggeres) forståelse og kunnskap om de unike fordelene som er knyttet til bruk av undergrunnen, spesielt sosiale og miljøfordeler
- Håndtere og minimalisere risiko og sikre trygghet og sikkerhet ved alle underjordsaktiviteter
- Sikre bærekraftig utvikling

STRATEGY 2007 - 2010



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

1 - To reaffirm the Vision of the Association: *“ITA, the unquestioned Leader in Tunnelling and Underground Space”* which in actions means:

- To enlarge the geographical representation of ITA by increasing the number of its Member Nations, and also:
 - » Increase number of prime sponsors
 - » Increase number of corporate members and supporters
- To improve the relationship with International Organisations (EU, UN, World Bank etc) and Decision Makers especially those contributing to the Sustainable Development by the use of Underground Structures Worldwide (UWW)
- To improve the communication inside and outside of the Association
- To improve the Scientific, Technical and Training actions of the Association

2 - To approve the following plan of priority actions for 2007 - 2010:

- To improve the visibility of ITA-AITES by amending the name:
 - *International Tunnelling and Underground Space Association !!!!*
- To consolidate the Secretariat:
 - To employ a full time Executive Director !!!!
 - To employ an Editor for Communication means
 - To secure the necessary financial resources
- To continuously improve the ITA website (www.aites-ita.org): !!!!
 - To upgrade it regarding the existing and future documentation (virtual library)
 - To implement the section of "*Underground Structures Worldwide*" focusing on the information for the general public and decision makers
 - To implement a dedicated section to ITA Members (code-based access)
- To improve Communication between:
 - The Executive Council and Member Nations, in organising joint actions (seminars, forums, publications, website pages) and notably in developing the *ita@news*
 - ITA and International Associations and Organisations by promoting joint actions
 - ITA and the General Public, especially in participating in specific events
- To improve the dissemination (electronic and paper) of contributions by the WG and Committees, especially in the fields of Environment, Risk Management, Safety and Use of Underground Space.
- To increase the Training programme by ITA Committee on Training and Education (*ITA University Network*) !!!!



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

MEMBER NATIONS

- One representative body or society per Nation,
- Has the right to participate and vote in the GA,
- Has the right to have a seat in the Executive Council,
- Nominates representatives to GA, WG.





ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

MEMBER NATIONS LIST

- SOUTH AFRICA • South African National Council on Tunnelling -
- ALGERIA • Ministère des Travaux Publics -
- GERMANY • Deutscher Ausschuss für Unterirdisches Bauen
- SAUDI ARABIA • Ministry of Communications,
- AUSTRALIA • Australian Underground Construction & Tunnelling Association
- AUSTRIA • Austrian National Committee OIAV
- BELGIUM • Association Belge des Techniques et de l'Urbanisme Souterrain
- BRAZIL • Brazilian Tunnelling Committee,
- BULGARIA • Geotechnim-SVS,
- CANADA • Tunnelling Association of Canada,
- CHILE • Sociedad Chilena de geotecnia
- CHINA • China Civil Engineering Society
- COLOMBIA • Comité Colombiano de Túneles,
- KOREA • Korean Tunnelling Association,
- CROATIA • Craoatian Tunnelling Association
- DENMARK • Danish Society for Tunnels & Underground Works
- EGYPT • National Authority for Tunnels,
- SPAIN • Asociación Española de Túneles y Obras Subterráneas,
- USA • American Underground Construction Association
- FINLAND • Finnish Tunnelling Association,
- FRANCE • Association Française des Travaux en Souterrain,
- GREECE • Greek Tunnelling Society,
- HUNGARY • Association for Utilization of the Subsurface Space,
- INDIA • Central Board of Irrigation and Power,
- INDONESIA
- IRAN • Iran Tunnelling Association,
- ICELAND • Icelandic Tunnelling Society,
- ISRAEL •
- ITALY • Società Italiana Gallerie
- JAPAN • Japan Tunnelling Society,



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INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

MEMBER NATIONS LIST

- LESOTHO • Lesotho Tunnelling Society,
- MALAYSIA •
- MOROCCO • Association Marocaine des Travaux en Souterrain,
- MEXICO • Asociación Mexicana de Ingeniería de Túneles y Obras Subterráneas,
- NORWAY • Norsk Forening for Fjellsprengningsteknikk (NFF),
- NETHERLANDS • Tunnelling and Underground Works Division of Kivi,
- POLAND • Podkomitet Budownictwa Podziemnego,
- PORTUGAL • Sociedade Portuguesa de Geotecnia,
- CZECH REPUBLIC • Czech Tunnelling Committee,
- ROMANIA • Association Roumaine des Tunnels,
- UNITED KINGDOM: British Tunnelling Society
- RUSSIA • Russian Tunnelling Association,
- SINGAPORE • Tunnelling and Underground Construction Society,
- SLOVAKIA • Slovak Tunnelling Committee,
- SLOVENIA • Slovenian National Committee on Tunnel Construction and Underground Structures,
- SWEDEN • BK Swedish Rock Construction Committee,
- SWITZERLAND • Groupe Spécialisé pour les Travaux Souterrains,
- THAILAND • ITA Thai Nation Member,
- TURKEY • Turkish Road Association Erer SA,
- UKRAINE • Interbudtunnel Corporations,
- VENEZUELA • Socvenos,
- VIETNAM
- PERU (2008)
- KASAKHSTAN (2008)

- Corporation, societies, in special cases individuals (to be approved by the GA)
- Receive a membership diploma
- Have the rights to:
 - » participate in the general assemblies, conferences, symposia, workshops etc.
 - » participate in the working groups
 - » use the reference “ITA Member”
- Receive free of charge the publications supported by ITA: ITA Reports, TUST, TRIBUNE, ita@news,
- Have free access to the ITA Website



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Diversity of Membership

- Owners, Public and Private
- Owner's engineering agencies
- Private and governmental Townplanners
- Architects
- Engineering designers & consultants
- Academia & Researchers
- Heavy construction contractors
- Specialty contractors (microtunnelling, shotcreting, freezing,...)
- Material & Equipment Suppliers
- Lawyers
- Politicians
- Economists
- Financiers
- Mine owners and mining operators



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INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Prime Sponsors

- Significant Contribution for 5 year period
- Special Relationship with ITA
- Invited to Inform ITA Regularly on:
 - Choice & Organization of Events
 - Important Issues to the Prime Sponsor
- Added Exposure & Promotion
 - Direct Link on ITA Home Page to their Website
 - Promotional Opportunities at ITA events



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

Supporters

- Year-by-Year Contribution
- Web Link from ITA Advertising Pages



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

ACTIVITIES

- AITES-ITA annual World Tunnel Congresses
- ITA General Assembly/Open session
- Training for Young professionals
- Organising international studies and experiments,
- ITA Master Courses
- Publication of proceedings, reports, documents...
- Organizing Workshops, short courses and Colloquia
- Website
- Journal & Newsletter
- Communication with the Decision Makers



General Assembly



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN





ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

GENERAL ASSEMBLIES

1974 • OSLO

1975 • MUNICH

1976 • LONDON

1977 • STOCKHOLM

1978 • TOKYO

1979 • ATLANTA

1980 • BRUSSELS

1981 • NICE

1982 • BRIGHTON

1983 • WARSAW

1984 • CARACAS

1985 • PRAGUE

1986 • FLORENCE

1987 • MELBOURNE

1988 • MADRID

1989 • TORONTO

1990 • CHENGDU

1991 • LONDON

1992 • ACAPULCO

1993 • AMSTERDAM

1994 • CAIRO

1995 • STUTTGART

1996 • WASHINGTON

1997 • VIENNA

1998 • SAO PAULO

1999 • OSLO

2000 • DURBAN

2001 • MILAN

2002 • SYDNEY

2003 • AMSTERDAM

2004 • SINGAPORE

2005 • ISTANBUL

2006 • SEOUL

2007 • PRAGUE

2008 • AGRA

2009 • BUDAPEST

2010 • VANCOUVER

2011 • HELSINKI

OPEN SESSIONS



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

- **Held at World Tunnel Conference every year since 1974**
- **Specific recent Topics of importance to Tunnelling:**
 - **1995 : Mechanisation of excavation - New technologies and financial aspects**
 - **1997: Choice of Tunnelling Methods**
 - **2003: Immersed Tunnels**
 - **2006: Risk Management**
 - **2007: New Financing trends and Consequences on Tunnelling contracts**
 - **2009: Planning of Modern Tunnel Projects**

OPEN SESSIONS



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

- 1977 : Safety in service
- 1978 : To go underground : Right or wrong?
- 1979 : Member Nation addresses during RETC
- 1980 : Safe practices in tunnelling
- 1981 : Use of subsurface in developing countries
- 1982 : The subsurface : contributions to energy savings
- 1983 : Urban Contracting and the environment
- 1984 : Seismic effects on underground works
- 1985 : Underground Works in Urban Areas
- 1986 : Approaching the XXI st century. Expectations and perspectives
- 1987 : Subsurface developments in the urban community
- 1988 : Minitunnels
- 1989 : Future of mechanised tunnelling
- 1990 : Management of underground works
- 1991 : Utility tunnels
- 1992 : Towards new worlds in tunnelling



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OPEN SESSIONS

- 1993 : At or below ground level
- 1994 : Straits of Gibraltar
- 1995 : Mechanisation of excavation - New technologies and financial aspects
- 1996 : Tunnelling and underground space toward sustainable urban development
- 1997 : Choice of tunnelling methods
- 1998 : Contribution of small sized tunnels to the development of metropolises
- 1999 : Past, present and future of tunnelling
- 2000 : Mining and tunnelling : shaft construction
- 2001 : Project financing
- 2002 : Fire & Life safety
- 2003 : Immersed Tunnels
- 2004 : Underground Space for Sustainable Urban Development
- 2005 : Underground Space Use - Analysis of the Past and Lessons for the Future
- 2006 : Risk Management of Tunnel Projects
- 2007 : New financing trends and consequences on Tunnelling contracts



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ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

3 Committees and 12 Working Groups

- Committee on Operational Safety of Underground Facilities
- Committee on Education and Training
- Committee on Underground Space
- Research
- Contractual practices
- Health & safety in works
- Maintenance & repair
- Immersed & floating tunnels
- Use of shotcrete
- Mechanised tunnelling
- Underground works & environment
- Long tunnels at great depth
- Training
- Conventional Tunnelling
- Urban problems, Underground solutions

Working Groups



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ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN



- Fire Protection Engineering for New and Existing Tunnels (WG12 and COSUF-2006)
- Shotcrete: State of the art (WG12 - 2006)
- Booklet Safe Working in Tunnelling (WG5 - 2005)
- Settlements in Soft Grounds (WG2 - 2007)
- Standards and Manuals in Mechanized Tunnelling (WG14 - 2007)
- Training Course “Tunnelling in Urban Areas” (WG18 - 2007)

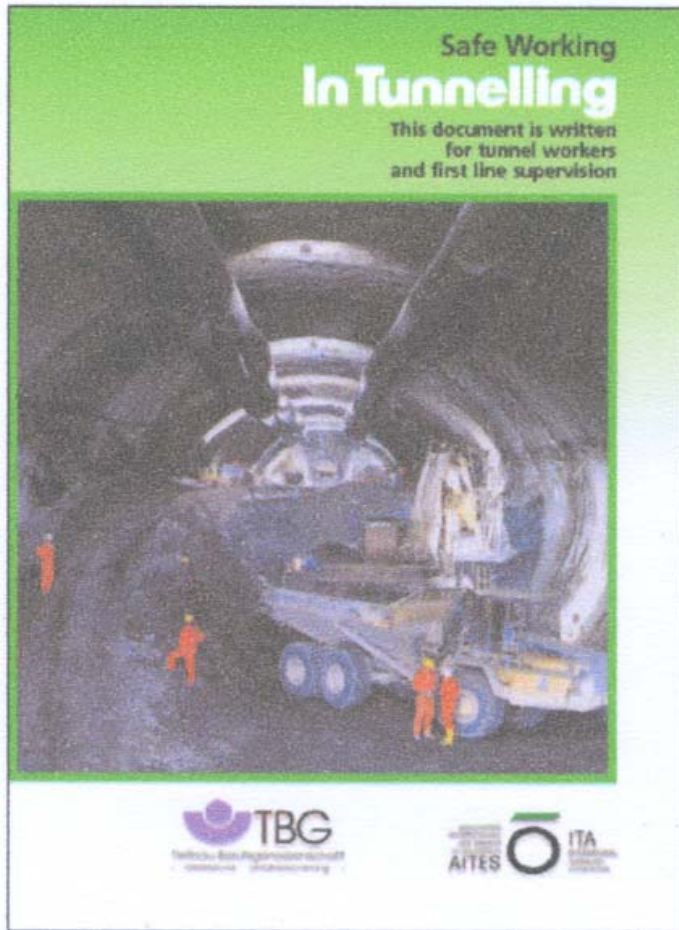


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Safe working in Tunnelling



Example page: ITA Safety Book



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ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

3.1

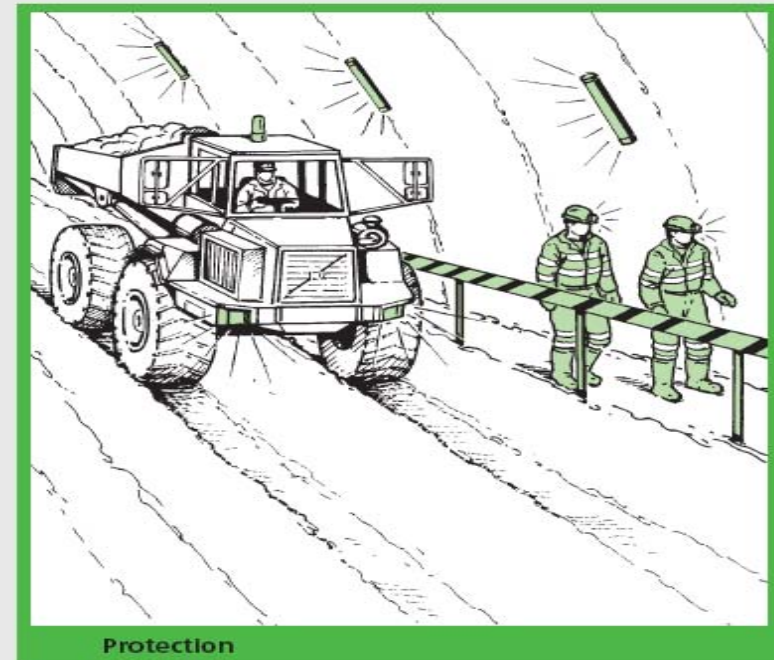
Walkways with Non-rail Operation



24

Danger

- being struck



25

Protection

- separate paths for vehicles and pedestrians
- install guard rails alongside the pedestrian path
- maintain the vehicle path surface and wet it to reduce dust

ITA - COSUF



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ITA - COSUF Committee on Operational Safety of Underground Facilities

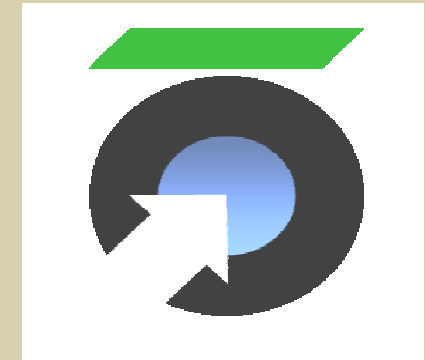
founded 11.05.2005 WTC Istanbul

Headed by F. Amberg

ITA + PIARC

7 + 1 projects out of 5th and 6th
EU Frame-Research-Programme

open for all interested parties dealing
with design, construction, operation, use, and
research





ITA-CET Committee on Education and Training (University Network)

Under creation: Torino May 2008

Headed by A. ASSIS (Brazil)

- Short Courses for Young Professionals
- ITA Master Courses
- Training Material from the Working Groups results
- Regional Workshops



ITA-CUS - Committee on Underground Space

Founded in Amsterdam early 2008

Headed by Han Admiraal (Netherlands)

Programme under construction

TASK FORCES



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

- Glossary
- Risk Financing
- Risk Management
- Security
- Underground Worldwide



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Glossary

ITA INTERNATIONAL TUNNELLING ASSOCIATION

TOWARDS AN IMPROVED USE OF UNDERGROUND SPACE

GLOSSARY

Records : 1229
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First record : 0
Filtered records : 10

Print

FILTERS

Current applied filters :

The words begin with --> **B**

Main category --> **Environment**

Sub category --> **Geology, Hydrogeology, Geotechnics**

Delete current filters

The words begin with 0-9 - A-Z :

B ▼

Main category :

Environment ▼

Sub category :

Geology, Hydrogeology, Geotechnics ▼

Apply filters

FILTERED RECORDS

Word	Definition	Main category	Sub category
BEDDING	The arrangement of rocks in layers, strata, or beds of varying thickness and character; usually applied to sedimentary rocks, in which case it is synonymous with "stratification".	Env	Geol
BLOCKY ROCK	Rock having joints or cleavage spaced and oriented in a manner such that it readily breaks into loose blocks under excavation conditions.	Env	Geol
BOREABILITY	A value expressing the boring properties of rock in terms of the penetration rate with certain numbers/types of cutters and amount of pressure applied. Equivalent to "tunnelability", the ease or difficulty with which a rock type can be penetrated by a tunnel boring machine.	Env	Geol
BOREHOLE		Env	Geol
BORING		Env	Geol
BORING STROKE		Env	Geol
BOULDERS		Env	Geol
BRISANCE		Env	Geol
BRITTLENESS		Env	Geol
BURDEN		Env	Geol

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Print



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Web conception by !GREGORK : www.gregork.org.



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Web Site www.ita-aites.org



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INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

NAVIGATION MENU

- Homepage
- ITA ASSOCIATION
- Disclaimer
- Sitemap

COMMITTEES

- ITA-CET
- ITA-COSUF Website
- ITA-CUS

DIRECT ACCESS

- Corporate Members and Supporters
- Future Events
- How to become member ?
- Member Nations
- Products and Publication
- Selected Key-Lectures
- Sister Organisations
- Training Material & Seminars
- TUST
- Working Groups

IT@NEWS

Register now!

CONTACT

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 Bât. GC
 Station 10
 CH - 1015 Lausanne
 Tel. : + 41 21 693 23 10
 Fax : + 41 21 693 41 53
 Email : secretariat@ita-aites.org
 Web : www.ita-aites.org

PATH : ITA-AITES > Homepage

HOME PAGE

29.04.2008 Latest News

Latest contents available in the ITA members restricted area



- Thesis of Donald Lamont (animateur WG5) : **A study of decompression illness and its regulation in contemporary UK tunnelling - an engineering perspective**
- New Delhi, **Conclave on "Contract Management for Accelerated Development of Indian Hydropower Projects"**
- Istanbul - **1st Black Sea and 4th Silk Road Conference**
- Shanghai Symposium - **Conference of Prof Qian Qihu on Risk Management**
- STUVA Tagungs 07- **Keynote lectures**
- Shanghai Symposium - **Keynote lectures**
- Gibraltar strait crossing - **Proceedings of the 4th UN-ITA Workshop**
- more

IT@NEWS23 -- Updated April



The 23rd ITA newsletter available!

ITA-COSUF - latest news



- News from the chairman, February 2008 - [download here](#)
- 23 April 2008 Workshop TU-Graz - [download the programme \(updated April 14, 2008\)](#)

ITA-AITES World Tunnel Congresses and ITA General Assemblies - Updated March



The ITA-AITES World Tunnel Congress 2008, will take place in Agra, India between the 19th and 25th September 2008.
 The main theme of the congress will be: "Underground Facilities for Better Environment & Safety"
 The 3rd bulletin and 4 page flyer have been published
 -Website

AGRA (INDIA) 2008



The ITA-AITES World Tunnel Congress 2009 "Safe Tunnelling for the City and Environment" will take place in Budapest/Hungary on 23-28. May, 2009.
 The Call for Papers and the main topics as well as Call for Sponsorship and Exhibition is now available on the website.

BUDAPEST 2009



PRIME SPONSORS



Published bimonthly:

- News from the Association,
- News from Sister Associations,
- Activities of the Working Groups,
- News from the Member Nations
- News from the ITA World Tunnel Congresses,
- Forthcoming events,
- Publications



The screenshot shows the header of the newsletter with the ITA-AITES logo and the email address *ita@news*. Below the header is a message: "If this letter does not display correctly, please go to this page : <http://www.ita-aites.org/cms/1584.html>".

The main content area includes:

- ITANNEWS #16
- Date : 22 December 2006
- Dear ##USER_name##,
- Seasons Greetings
- A large collage of photos from a conference with the text: "Bonne et Heureuse Année Happy New Year 2007". Below the collage, it says "5-10 MAY / PRAGUE / CZECH REPUBLIC" and "The Secretary General and the Secretariat wish you a Happy New Year 2007 and hope to see you in Prague".
- A "Contents" sidebar with the following items:
 - Seasons Greetings
 - News from Member Nations
 - WTC'07 in Prague
 - WTC'08
 - WTC'09
 - Training
 - News from The Executive Council
 - ECTP
 - International Conferences
 - News from Sister Association

A specific website for the general public dedicated to all aspects of underground structures - A specific part in the ITA web site

Why : find reasons to use the underground space

How : explore design and construction techniques for building underground structures

Use : find examples of types and possibilities of underground structures.

Case histories and statistics.





UNDERGROUND STRUCTURES WORLDWIDE

A specific website for the general public dedicated to all aspects of underground structures
A specific part in the ITA web site

A dynamic menu with submenus allows to know from the first pages all the contents of the website and to go directly to the pages you are interested in.

Specific links to upper level or subpages are available.

A powerfull search engine will be implemented.

The screenshot displays the ITA International Tunnelling Association website. At the top, the logo reads "ITA INTERNATIONAL TUNNELLING ASSOCIATION" with the tagline "TOWARDS AN IMPROVED USE OF UNDERGROUND SPACE". Below the logo, a breadcrumb trail shows "PATH : ITA-AITES > How to go underground...". A horizontal navigation bar contains links for "WHY GO UNDERGROUND", "HOW TO GO UNDERGROUND", "USE OF UNDERGROUND SPACE", "SAFETY", and "CASE HISTORIES". The "HOW TO GO UNDERGROUND" section is expanded, showing a dropdown menu with options: "Design", "Construction", "Operation", and "Research". A sub-menu for "Construction" lists "Full-Face Excavation", "Pre-support Methods", "Sequential Excavation", "Subaqueous tunnelling", and "Combination of Methods (mechanised and conventional)". Below the menu, there are three main content areas: "Design" (featuring a circular tunnel cross-section diagram with numbered points and a "Drainage: separated system" label), "Construction Methods" (with an image of a tunnel under construction), and "Operation" (with an image of a control room). A search bar with a "Search" button is located on the right. A "DIRECT SUBPAGES" section on the right side of the page features a "One level up" button and a list of subpages: "Design", "Construction Methods", "Operation", and "Research".



UNDERGROUND STRUCTURES WORLDWIDE

A specific website for the general public dedicated to all aspects of underground structures
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On each page relevant examples with links to papers, pictures, proceedings, videos, external websites will be given.

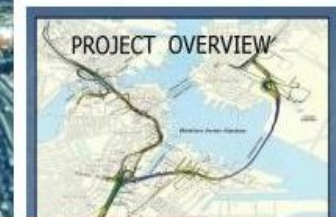
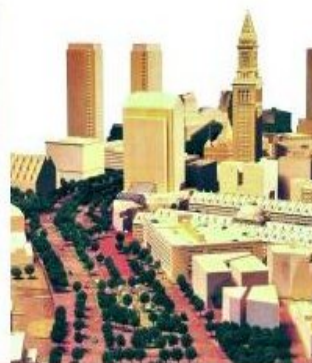
The construction of the Grand Louvre museum in Paris is a typical example. Getting the entrance and all the administration facilities allow a enormous gain of space for the museum and the construction of a building above the surface was of course not acceptable in such an historic place.



▪ [website on the Grand Louvre architecture](#)

The Central Artery - Boston example

In this project, it has been decided to build underground structures to replace above ground ones, which were not accepted by the population, divided city areas and were not coping with the increasing traffic.





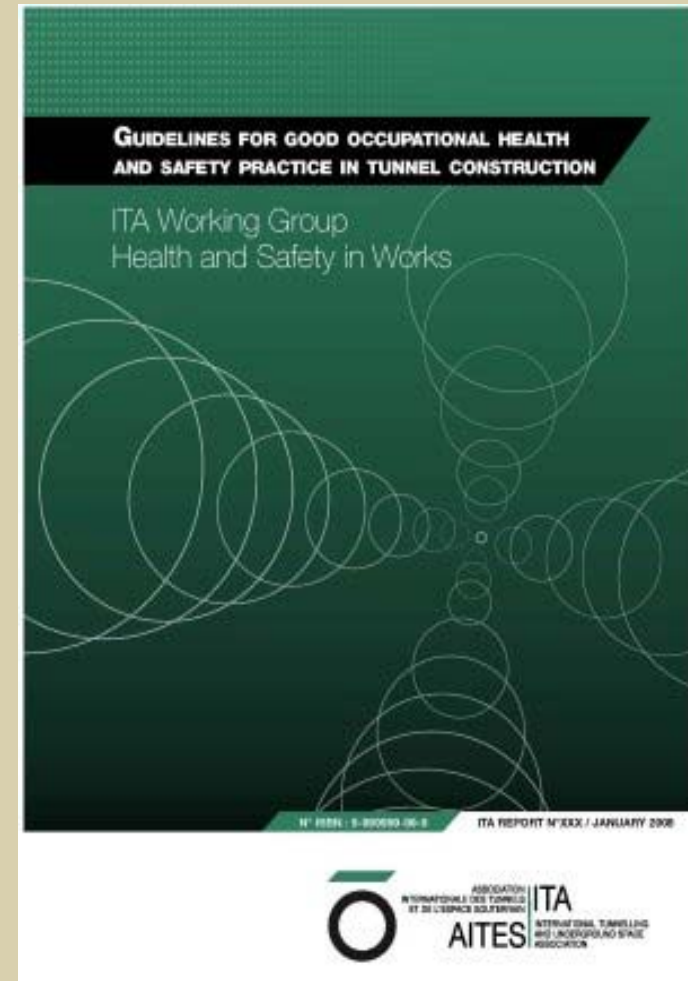
ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

ITA- REPORT

- A new media to publish the reports from the ITA working Groups and Committees as well as ITA Position Papers
- Reports to be published in 2008:
 - WG5: Guidelines for good occupational Health & Safety
 - WG19: General report on conventional tunnelling
 - WG12: state of the art of shotcrete use



- Since 1987, ITA, as NGO, is in Consultative Status Category II with ECOSOC, the Economic and Social Council of the United Nations.
- ITA has actively participated to UN activities: Habitat II, Gibraltar Straits, Reduction of Poverty, World Urban Forum,
- ITA organized a workshop on Sustainable Development on December 14th, 2007

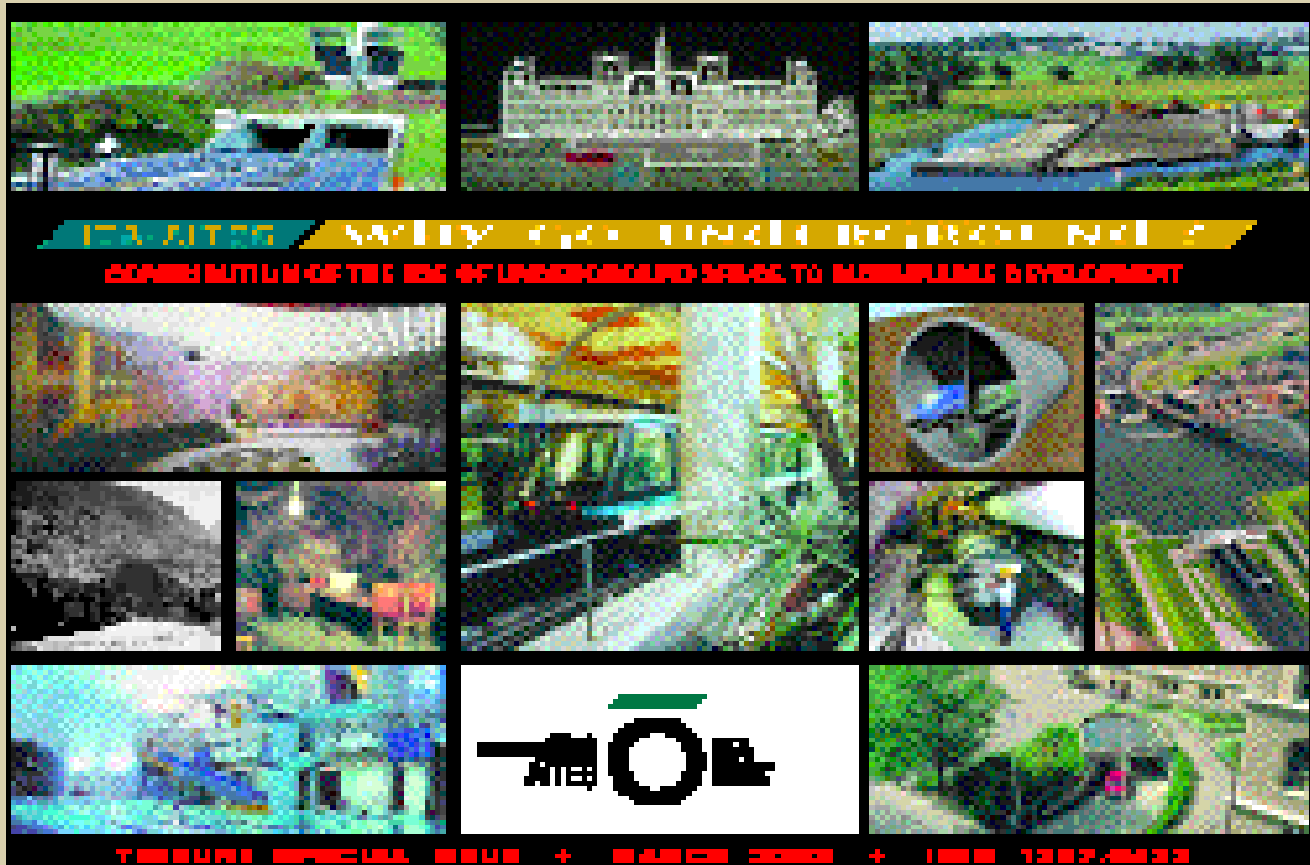


ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

WHY GO UNDERGROUND





ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

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ITA-AITES

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ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

SUMMARY

- ITA means NETWORK
- ITA means FORUM
- ITA means ORGANIZER
- ITA means COMMUNICATION

*ITA, the unquestioned leader in the
Use of Subsurface Space*



ITA-AITES

INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN

WTC 2008

AGRA (India)

22-25 September 08

« Underground Facilities for Better Environment and Safety »

BUDAPEST (Hungary)

23-28 May 09

« Safe Tunnelling for the City and Environment »

