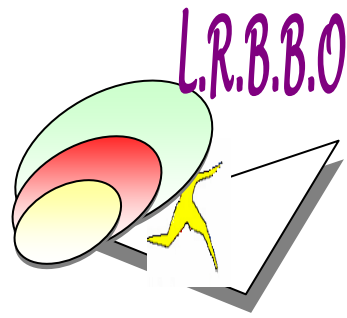




**AFRICAN FEDERATION  
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**Laboratoire de Recherche en Biomécanique  
et en Biomatériaux Orthopédiques**

## **Disability and Technologies Analysis of the situation and appropriate development in African countries**

*5<sup>th</sup> International Seminar of FATO*

**TUNISIA**

**27 TO 30 APRIL 2009**



## I) Introduction

The International seminar 2009 that will be held in Tunisia will be the first that FATO will organize in North Africa. In fact, it should be noted that since its creation all the seminars FATO were held in sub-Saharan Africa, even if the recipients were always the professionals from all parts of Africa, members or sympathizers of the FATO.

FATO since the revitalization of its activities in 1999 had now begun to mark its presence on the ground by some actions for the benefit of its members while promoting technical exchanges and practical experiences. The choice of Tunisia marks thus this real presence of our federation in most of the regions. All of the seminars of FATO were held in the following cities:

- *in Niamey (Niger) in 2002* and the theme was : "Amputations and related components."
- *In Lomé (Togo) in 2004* and the theme was: "Poliomyelitis and related components."
- *In Sally (Senegal) in 2005* and the theme was: "Training of orthopaedic consulting team on the management tools for a better sustainability of structures and for equity of care."
- *In Kigali (Rwanda) in 2007* and the theme was: "How to endow African countries with sufficient professionals to face the rehabilitation needs of disabled people."

FATO through these seminars, focused on the training of rehabilitation professionals, especially orthopaedic technicians and this, by conviction that the quality of a service passes inevitably by a quality of the training of these professionals. These various training sessions gathered about 450 participants coming from about thirty countries of Africa, Europe and America. These seminars allowed institute a system of consulting team (doctors, physiotherapists, P&O technicians) making thus the demonstration of the necessity of working in team in a concerted manner around the disabled person and not in a partitioned way as it is always the case in Africa.

After the experience of four seminars focused on the training of teams, it is time to start other themes of current events, especially those that are related to technologic progress in favour the people with disabilities. Thus, the present seminar will be built around this concept and will relate to the theme: "**Disability and Technologies. Analysis of the situation and appropriate development in the African countries**». It is planned to be held in Tunis (Tunisia) from 27 to 30 April 2009.

## II) Why this theme?

In all African societies, the population of persons with disabilities is dominated by the groups of physically people with disabilities who represent a majority (between 30 & 55%, comparatively to the other different kinds of disability. Among this population, a good percentage needs technological equipment (fitting / wheelchairs) that compensates their deficiencies/disabilities and/or promotes their integration in society. These technological equipments benefit from perpetual advances but that are most often done in industrialized countries.

This seminar of Tunisia 2009, which will gather rehabilitation professionals<sup>1</sup>, payers/insurances, governmental stakeholders who take care of persons with disabilities for their fitting and who use in their professional practices different techniques and technological equipment, will constitute an opportunity to analyze the situation of these technologies in term of degree of adaptability, acceptability, suitability and appropriation in African countries and to discuss about appropriate development possibilities of these technologies in those **African** countries.

## III) Objectives of the seminar

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<sup>1</sup> P&O Technicians, physiotherapists, rehabilitation doctors and orthopaedic surgeon, other rehabilitation professionals, orthopaedic materials manufacturers, non governmental organizations and United States international organizations

The objectives of this seminar are around the following questionings:

1. To what extent the technological advances took into account the needs of people with disabilities in African countries?
2. To what extent do rehabilitation professionals adapted these technological advances to the socio-economical realities of their countries?
3. What are the applications of the technological progresses to the realities of rehabilitation of the African countries and in favour the people with disabilities?

#### **IV) Why Tunisia?**

The experience of Tunisia in term of applied research and appropriate to the local context, although modest and at its beginning especially in the field of physical disability, represents an example to be followed by the other African countries.

It should also be noted that Tunisia has trained all the first orthopaedic technicians of French-speaking Africa, including those of Togo before the opening of the School of Lome in 1974. The choice of Tunisia to organize a seminar with a theme focused on "Disability and Technologies" is not thus a matter of chance.

Moreover, the choice of Tunisia meets the requirement to organize rotating activities in member countries of FATO in order to make professionals of the host country benefit from opportunity of a massive participation.

It should be noted that an agreement was already signed between FATO and LRBBO (Tunisian orthopaedic technicians and physiotherapists as well as the engineers in mechanical engineering are gathered in the LRBBO) to promote the collaboration in term of organization and implementation of joint projects aiming at raising the expertise of the rehabilitation professionals through training, research activities and the organization of common scientific events.

#### **V) Scientific Programme and period of the seminar**

Three themes will be discussed during this seminar. The discussion will be organized in the form of a plenary session for each theme followed by works in workshops.

For each plenary session, interventions will be asked to resource persons having a good ground experience in order to start the discussion.

Then the participants are divided into working groups to think and bring some answers to a certain number of questions pre-established by resource persons. The animation of these groups will be led in collaboration with experts in the question. Beside the animator, a reporter will be designed for each working group.

In end-of-day, a restitution of each working group will be made in plenary session followed by debates to validate the synthesis of the day.

After this synthesis, some thematic evenings will be organized on the same subject, they will relate to a particular experience lived by a country, an NGO or an industrial.

The following themes are:

**Theme 1** : Research Development and Disability : How to develop these activities in African countries and sensitize the publics authorities so as to include them in development programmes?

**Theme 2**. Engineering and Disability: Obstacles and facilitators of engineering for disabled people in African countries. How to develop sufficient production of quality and ensure the distribution?

**Theme 3.** Teaching / Technological training and Disability: How to develop technological training modules adapted to African local contexts? 2 aspects to discuss:

- Standard of training and necessary adaptation to stay in connection with a context of employment conditions
- Introduction of a component "research" at the level of training and reference institutes.

Thus the duration of the seminar, namely the official programme will be 3 days (one day per theme); in addition it is planned:

- Two days of training session for P&O technicians offered by the firm Otto Bock,
- One ½ day devoted to the question of wheelchairs and its problematics in Africa and
- One ½ day devoted to the elective general assembly of FATO.

In total, the period of this event will run between April 27 and 02 May 2009.

The seminar will probably be placed under the patronage of the Tunisian Minister of Social Affairs, Solidarity and Tunisians abroad.

## **VI) The promoters of the seminar**

This international seminar is organized by the African Federation of Orthopaedic Technicians (**FATO**) in collaboration with the Laboratory of Research in Biomechanics and in Orthopaedic Biomaterials (**LRBBO**) that regroups the rehabilitation professionals in Tunisia.

Other international organizations will be associated as partners of the project implementation. There are:

- ISPO France
- ISPO International,
- Handicap International, (HI), (Head office + Morocco+Tunisia)
- Swedish Institute of Assistive Technology/ SIAT and Sida
- African Rehabilitation Institute (ARI)
- Christian Blind Mission (CBM)
- Association of Parents and Friends of Disabled People in Tunisia (APAHT)

## **La Fédération Africaine des Techniciens Orthoprothésistes (FATO)**

FATO has been created since 1992. It is recognized officially in 1999 by the authorities of Burkina Faso where its headquarters is located. FATO acquired the status of Non Governmental Organization (NGO) since July 2003 and gathers associations of the African countries whose main objective is to promote the rehabilitation of the disabled people. Its mission is to organize and coordinate the actions to help their members to better exercise their profession. The specific objectives of the federation are as follows:

- To gather all the associations of the orthopaedic technicians of Africa within a framework of exchange of mutual assistance and development,
- To work for the medical rehabilitation of all the disabled people of Africa,
- To contribute to the promotion and the search for new technologies adapted to African realities,
- To establish the collaboration links with other similar organizations of the world,
- To create a framework of dialogue, training and experience sharing of the African countries, between themselves and other countries of the world.

The leading authorities of the federation are composed of a Federal Conference and a Regional Assembly. The Conference is the supreme authority of the Federation. It meets every two years in an ordinary session. The members of the Federation are gathered in five sections corresponding to the regional division of Africa established by the African Union (AU).

To date, about sixty orthopaedic centres are affiliated with the FATO. The physical members who are orthopaedic technicians (senior technicians, intermediate technicians, Deputee technicians and orthopaedists shoe-makers) are about two hundreds. National associations of the following countries have already been recognised (Benin, Burkina Faso, Burundi, Cameroon, Central Africa, Congo Brazzaville, Ivory Cost, Mali, Mauritania, Niger, Democratic Republic of Congo, Rwanda, Senegal, Chad and Togo). In other countries, the negotiations continue with the competent authorities.

Several activities are conducted on the field. They are mainly the training of leaders and members of associations, the creation of database regarding the professionals' associations and the structures in which they evolve, the organization of the reflexion and trainings workshops and a news sheet to connect national associations is published since September 2001.

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#### **Laboratory of Research in Biomechanics and in Orthopaedic Biomaterials (LRBOB)**

LRBBO was created in 1999 within the Institute of Orthopaedics M.T. KASSAB in Tunisia. It gathers, in addition to researchers and engineers in structure and in mechanical engineering, the rehabilitation professionals among whom the orthopaedic technicians members of FATO.

The actions of this laboratory are directed towards research & development and the control of quality and are based on a multidisciplinary collaboration focused on orthopaedics, mechanical engineering and material engineering. It is in keeping with the policy of the global upgrading of the Tunisian national economy in a esprit of complementarity and coordination of research between the clinic, the university and the industry in order to improve the quality of the service to ill persons and physically disabled persons.

Several projects were already carried out. Let's quote: Survey of the impact of new technologies on the development of orthopaedic surgery in Tunisia, Elaboration of a composite material with natural reinforcement (Alfa, Agave) for the confection of orthopaedic devices (prostheses and orthoses) and flexible bands, Expertise of des bioceramics used for the manufacturing of Total Hip Prostheses (THP).

Other projects are in course of realization, let's quote : Elaboration of a osseous substitute from Tunisian Coral and mother-of-pearl, Biomechanics of movement and modelling of locomotor system, Modelling of orthopaedic bio structures and tribological tests on PTH, Modelling and design of the orthopaedic memory-shape alloy implants.

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#### **Swedish Institute of Assistive Technologies (SIAT)**

The Swedish Institute of Assistive Technologies is a public organization that works in the field of assistive technologies for disabled persons in Sweden. The major activities are professional trainings, needs analysis, research and analysis of

assistive technologies. Information is disseminated through some publications, courses, conferences, exhibitions and on Internet.

In Developing countries, the institute makes some consultations with other disabled persons organisations in the field of assistive technologies and Community Based Rehabilitation.

Since 1994, the Swedish Institute of Assistive Technologies has regularly supported and financed the activities organized by FATO with the contributions of Sida, Swedish International Development Agency.

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## ISPO FRANCE

The French section which carries the denomination: I.S.P.O. FRANCE in direct relationship with I.S.P.O was created in 1994 and is today, by the number of its members, at the 6<sup>th</sup> world rank among the 28 member countries.

On the impulse of the members of our Constituent Assembly, the creation of I.S.P.O. FRANCE occurred when international exchanges go faster; and when we think useful that French professionals participate in.

ISPO is opened to professionals of Orthopaedics: Surgeons, Doctors, Orthopaedic Technicians, Podo-orthotists, Physiotherapists, Occupational therapists, Biomechanical Engineers.

ISPO - FRANCE is composed today of a little more than 106 members, 2 sponsors members, and 3 institutional members. Our wish is to associate to our firm, the most competent persons in their field, in order to propose qualified reference information.

ISPO - FRANCE organises each year its scientific national congress.

ISPO - FRANCE ensures the writing of the newspaper the "Le Journal de l'Orthopédie" in collaboration with T.O.I.

ISPO - FRANCE is affiliated to ISPO International.

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## ISPO (International Society for Prosthetics and Orthotics)

ISPO is an organization opened to professionals of orthopaedics: Surgeons, Doctors, Orthopaedic Technicians, Podo-orthotists, Physiotherapists, Occupational therapists, Biomechanical Engineers.

It was created in 1970 and gathers today about 2 500 members spread in more than 75 countries worldwide.

ISPO publishes two newspapers: There are:

- "Prosthetics and Orthotics International"
- "Ortholetter": an information bulletin published by ISPO and WHO for developing countries.

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**Handicap International (HI)**

HI is an international, non governmental organisation of solidarity, created in 1982 and which stipulates in its statutes that "it works alongside people with disabilities, whatever the context, on the national territory or in all the regions worldwide". Handicap International is one of the six NGO co-founder of the International Campaign to ban landmines, Nobel Peace Prize in 1997.

On the geographical level, HI is present in nearly forty countries, appreciably affected by poverty and armed conflicts.

The Approaches and methods of action retained by HI are the following: the reduction of vulnerabilities thanks to solutions adapted to socio-economical environment and the development of local capacities thanks to training and to partnership.

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**Christian Blind Mission (CBM)**

CBM's aim is to serve persons with visual impairment as well as people with other disabilities in developing countries—regardless of their nationality, sex, or religion. The history of CBM goes back to 1908, when the organisation was founded by the German Pastor **Ernst Jakob Christoffel**. Since then, CBM has become one of the leading professional organisations for people with disabilities worldwide. Currently, CBM supports 1005 projects in 113 countries.

Today, CBM's fields of work cover not only the prevention and cure of blindness, but also the education and rehabilitation of people with physical, mental, or intellectual disabilities. CBM implements its programmes through **local partners**. The financial resources, know-how, and staff-support enable partners in developing countries to gradually become independent of foreign aid. Ten CBM **member countries** and major donors provide the funds CBM needs to implement the worldwide programmes.

Overall aims of CBM's overseas work are to:

- Enable CBM's partners to deliver services in cooperation with disabled people's interest groups,
- Give people with disability the support they wish,
- Promote their inclusion, and
- Raise awareness for their needs

To achieve these aims, CBM cooperates with **global institutions** and contributes to **international campaigns**. CBM has been recognised as a professional organisation for people with disabilities by the World Health Organisation and obtained roster consultative status with the United Nations Economic and Social Council.

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**West African Regional Office of the African Rehabilitation Institute (ROARI)**

The African Rehabilitation Institute (ARI) is a Pan-African Network Programme for Manpower Development and Research, in the field of Rehabilitation and Disability Prevention. ARI collaborates with African Governments, African and International Non-Governmental Organisations, and with the United Nations Specialised Agencies, for the purpose of developing a concept of African self-reliance , in various fields of disability prevention, medical rehabilitation, special education , equalization of employment opportunities for disabled persons, giving priority in the area of training professional personnel, qualified to plan, direct and evaluate programmes in these specialized fields.

ARI is an Institution of the African Union in charge of rehabilitation questions. It raises awareness and support African States for a better application of the resolutions of the African Union in favour people with disabilities.

ARI is in charge of the implementation of the action plan of the African Decade of people with disabilities.

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**Association for Parents and Disabled Persons of Tunisia (APAHT)**

Created in 1985, APAHT is a non-profit Tunisian NGO Tunisian that works in the field of care for people with disabilities having a physical disability associated or not to a minor mental disability.

It's main objective is the integration of these people. Its approaches of interventions are focused primarily on the most remote and disadvantaged areas, awareness and guidance of disabled persons' parents and the achievement of sustainable development project.

The association supports over 1000 children and adolescents in 20 centres spread in the whole republic. It received the in 2001, the prize of the President of the Republic for children's rights

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**VII) The activities of preparation**

- Identification of material and human resources necessary to achieve this seminar project
- Preparation of the scientific programme of the seminar



- Identification the exhibitors specialized in the field of technical orthopaedics and assistive technologies including wheelchairs.
- Identification of the appropriate venue for the organisation of the seminar and the exhibition

### VIII) Material and human resources

a) **The material resources** necessary to the holding of this seminar amount 100 thousand euros. These resources must cover the following expenses:

- Air tickets
- Board and lodging
- Local transport
- conference rooms
- audio-visual materials
- simultaneous translation (French/ English)
- printing of the seminar documents

The material resources will be ensured by the organizers of the seminar. The present project of seminar will be submitted to some partners in order to request their support. Contacts will be taken with other organisations intervening in the case management of people with disabilities such us United States agencies, NGO and BAD to request their financial participation for the taking in charge of the countries teams invited (air tickets, accommodation). Moreover, countries eager to take part in this seminar will raise funds at national level.

b) **The human resources** are constituted by experts and supervisors that will be put at disposal by partners associated to the organisation of the seminar as well as the administrative staff that will be ensured by local organizers.

The animation and the technical monitoring of the seminar will be ensured by persons coming from the following institutions:

ISPO International .....	2 persons
ISPO France .....	2 persons
FATO .....	3 persons
ARI.....	1 person
SIAT.....	1 person
CBM.....	1 person
Handicap International .....	1 person
LRBBO .....	2 persons
CETIME <sup>2</sup> .....	1 person
CERAH <sup>3</sup> .....	2 persons
CTNERHI .....	.1 person

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<sup>2</sup> CETIME : Technical Centre for mechanical and electrical industry

<sup>3</sup> CERAH : Centre for Studies and Researches on Assistive Technology for Disabled Persons

<sup>4</sup> HI: could establish the link with the universities or others to be identify

## IX) The participants of the seminar

The expected participants will be about three hundred persons and from about thirty African countries as well from Europe. Each invited country will be represented on average by a team based on constraints and own interests.

Given the federative objective, one orthopaedic technician should at least be part of the team (with the exception for the organising country that may participate with three teams or more).

The National associations of orthopaedic technicians, persons with disabilities, rehabilitation section and physiotherapists will be given the opportunity to appoint delegates having the skills and abilities needed to assimilate and transmit knowledge that will be performed.

### a) Number of participants planned per country

#### West Africa

Benin..... 3 persons  
Burkina Faso..... 3 persons  
Guinea Conakry .... 3 persons  
Mali ..... 3 persons  
Mauritania ..... 3 persons  
Niger ..... 3 persons  
Togo..... 3 persons  
Senegal..... 3 persons  
Ivory Coast..... 3 persons  
Sierra Leone..... 2 persons  
Gambia.....1 person  
Cape verde.....1 person  
Guinea Bissau.....1 person  
Nigeria.....3 persons

#### Central Africa

Central African Republic 1 person  
Gabon ..... 1 person  
Rwanda ..... 3 persons  
Chad ..... 3 persons  
RDC.....3 persons  
Cameroon.....3 persons  
Burundi.....3 persons  
Sudan..... 3 persons

#### North Africa

Tunisie.....10 persons  
Maroc.....3 persons  
Algeria..... 3 persons  
Libya..... 3 persons  
Egypte..... 3 persons

#### East Africa

Tanzania.....3 persons  
Ethiopia.....3 persons  
Zimbabwe.....3 persons  
Uganda ..... 3 persons  
Kenya .....3 persons  
Malawi ..... 3 persons

#### Other countries

South Africa  
Mauritius  
Madagascar  
Comoro Islands  
Somali land  
Zambia  
Mozambique  
Angola

### b) The organizations invited :

Various organisations and institutions that support the African continent in the field of rehabilitation will be invited:

- Swedish International Development Agency (SIDA)
- France Embassy in Tunisia
- Holland Embassy in Tunisia
- Africaine Development Bank (BAD)
- War Veterans Centre in Tunisia
- Collège Mérici in Canada
- International Committee for Red Cross and Red Crescent (CICR/SFD)
- German Cooperation (GTZ)
- CR Equipements SA
- Janton
- Otto Bock
- Proteor
- West African Federation of Disabled Persons (WAFOD)
- HI programmes/ concerned desks
- INTERBOR
- United Nations Development Programme (UNDP)

- Lycée Mont Plaisir
- PISANA
- MC LEAN REHATECHNIK
- DAW
- BASCO CAMP
- ORFITE
- SCHEIN
- Misereor
- National Office of Assistive Technologies and its Accessories for Disabled Persons (ONAAPH) in Algeria
- Arab Organisation of Disabled persons
- World Health Organisation (WHO) in Geneva, Harare and Tunisia
- Rehabilitation International (RI)
- Secretariat of the African Decade of People with Disabilities
- Secretariat of the Arab Decade of People with Disabilities
- UNICEF
- European Union Européenne (EU)
- French Union of P&O Technicians (UFOP)

### **c) Tunisian associations and institutions invited**

- Association for Assistance to Severe Disabled People at home (AAGHD)
- Association of Tunisian Persons with muscular dystrophy (AMT)
- Association of Parents & Friends of Disabled People of Tunisia (APAHT)
- General Association of Motor Disabled (AGIM)
- Tunisian Association of Medicine and foot and ankle surgery (ATMCPC)
- Tunisian Association of Physiotherapists (ATK)
- Professional Training Centre for Motor Disabled Persons and victims of an accident (CFPHMAV)
- Technical Centre in wood Industry and furnishing (CETIBA)
- Technical Centre in mechanic and Electric Industry (CETIME)
- General Direction for Social Promotion (DGPS)
- Institute for the Promotion of Disabled People (IPH)
- Tunisian Society of Orthopaedic surgery and Trauma medicine (SOTCOT)
- Tunisian Society of Physical and Rehabilitation Medicine (SOTUMER)
- Tunisian Union for Social Solidarity (UTSS)

### **X) Working languages**

French and English will be the two working languages. A simultaneous translation will be available.