

# The PATTEC Initiative

Tsetse transmitted African  
Trypanosomosis only in Africa

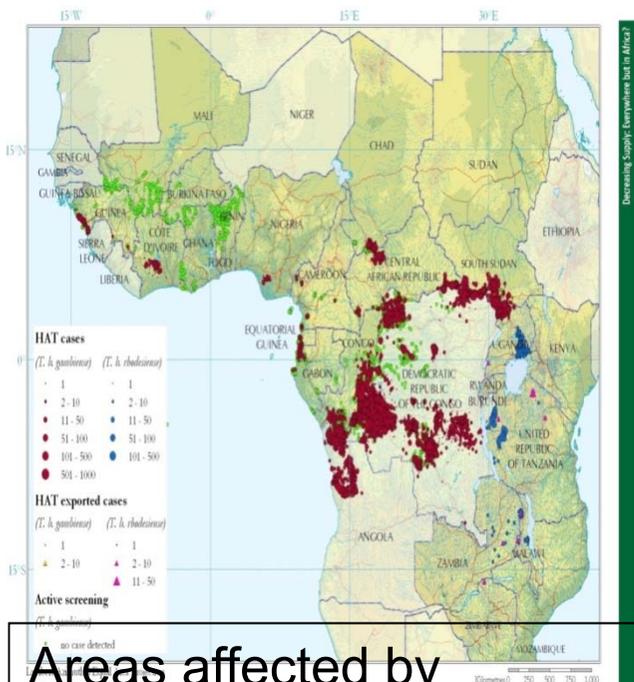


# Importance of T&T

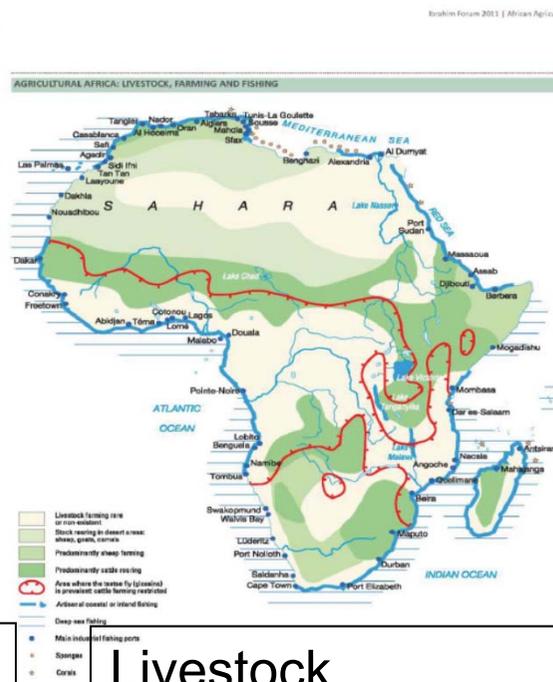
- Africa = 60% of world arable land;
- Tsetse affects ~ 10 million km<sup>2</sup> (>80% of arable land);
- 38 countries;
- Trans-boundary problem;
- Disease affects human & animals.



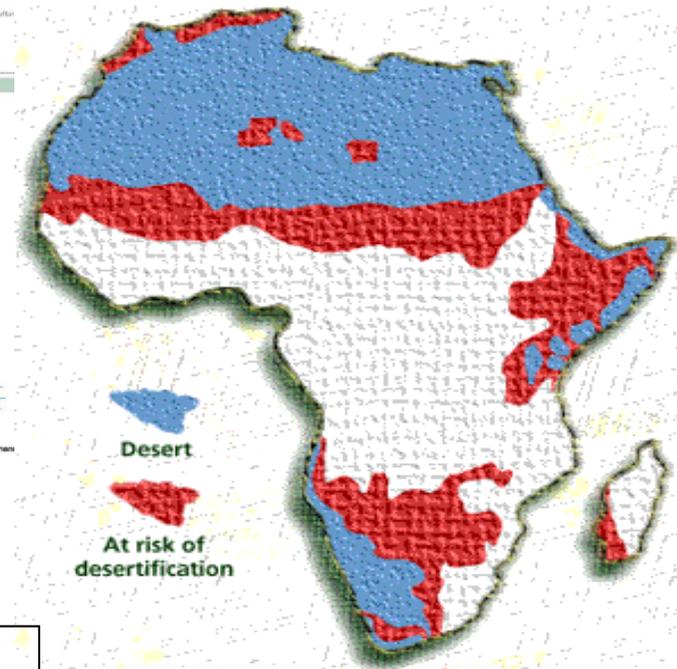
# Importance of T&T



Areas affected by *Gambiense* (R) & *Rhodesiense* (B) HAT



Livestock production zone



60% world arable land yet to be used

160 Million heads of cattle excluded from T&T infested areas  
 ~ 50 Million at risk to be infected  
 ~ 3 Million die annually



# Impact of T&T on communities

- Predominantly on rural communities;
- Accessibility to land for agriculture in general;
- Low livestock and agricultural productivity & production;
- Reason of minimal use of draught animals in Africa (5–10%);
- Limited practice of mixed farming;

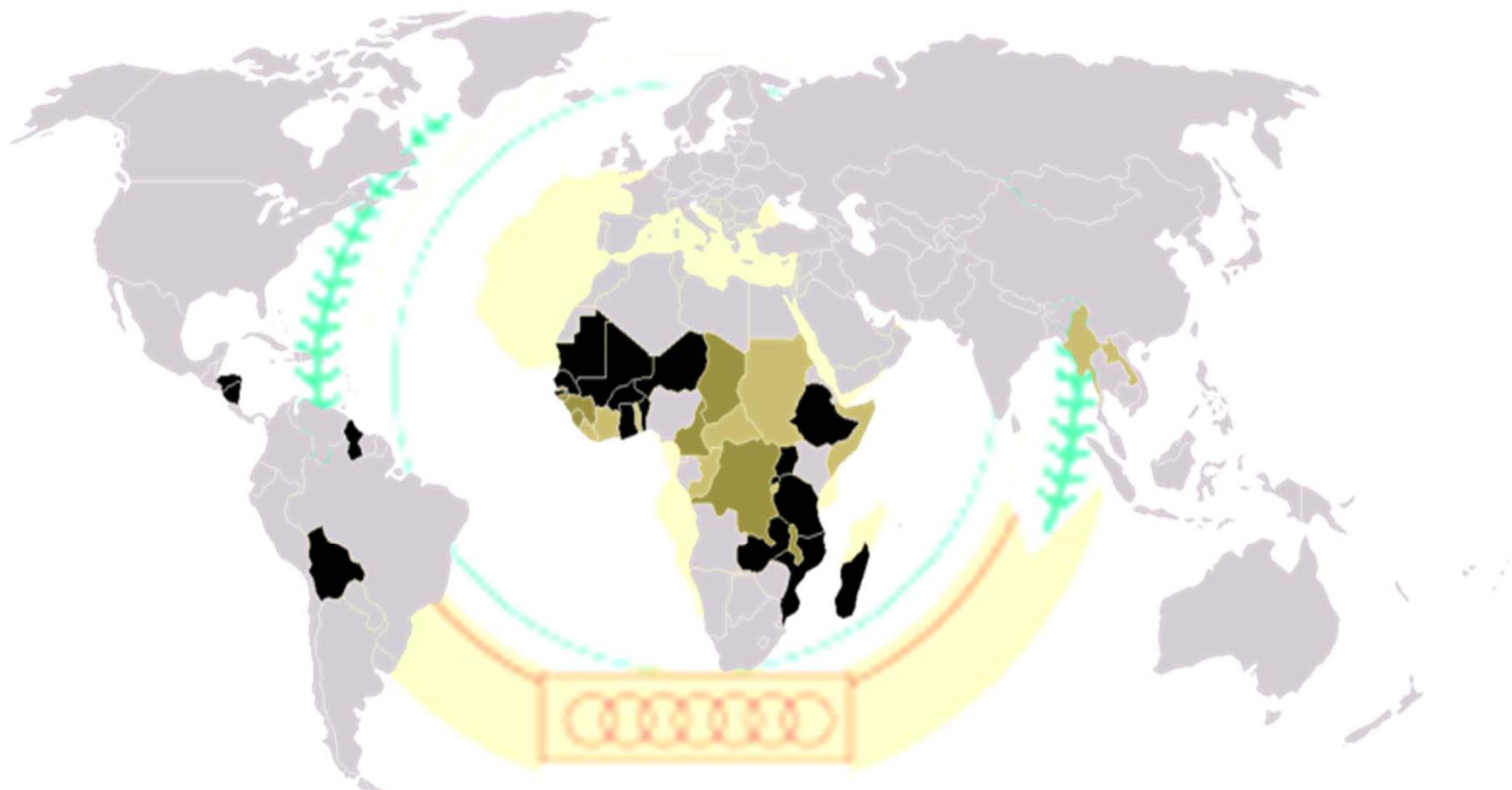


Countries living with T&T often use unsustainable control systems



**Significant economic losses > USD 4,5 Billion (FAO & DFID)**

# Impact of T&T development / Poverty



32 of 39 IMF-assisted HIPCs in T&T affected areas

21th Conference of OIE RC for Africa, 16 – 20.2.2015. Rabat, Morocco

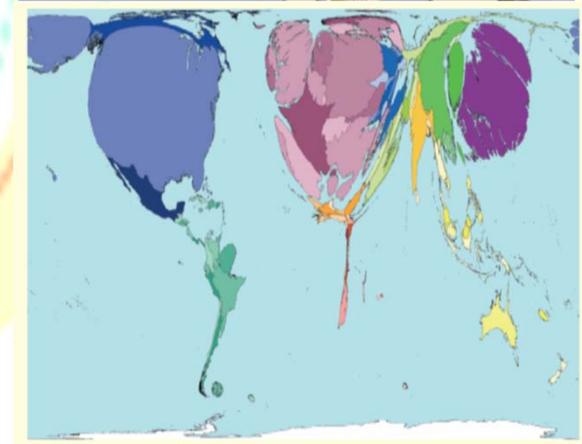


# Impact of T&T development / Economy



Marcella Alsan -Tsetse suitability index, 6.14

- Tsetse reduced ability of Africans to generate agricultural surplus historically;
- People in affected areas - No use of domesticate animals, plow, less likely to be practically centralized & lower population density;
- Correlation not found where tsetse doesn't exist;
- Current economic performance affected by tsetse through channel of pre-colonial political centralization.





# Solutions

## HAT & AAT - No vaccine

- 1. HAT Trypanocidal drugs** - Treatment with Eflornithine (for *T. b. gambiense* only); Melarsoprol (arsenic based) Pentamidine (for *T. b. gambiense* only)
- 2. AAT Trypanocidal drugs** - Sumarin, Diminazene aceturate, Homidium bromide, Homidium chloride, Quinapyramine methyl sulphate, Isometamidium chloride, Melarsenoxide cysteamine (*Mel Cy*). Reduced effectiveness and availability of Animal Trypanocides.
- 3. Use of Trypanotolerant** breed cattle mainly Ndama cattle, widely distributed in West Africa, Good production in areas of low challenge, Small size – draught power?
- 4. Vector control**

**Problems:** Difficult administration, inefficiency, resistance, reduced effectiveness, lack of standards, etc.





# PATTEC Initiative

Adoption of **Decision AHG/Dec. 156 (XXXVI)**, urging MS to act collectively to embark on PATTEC Initiative by African HSG, at 36<sup>th</sup> Ordinary Summit held in Lomé, Togo, July 2000 for:

- Creation of T&T free areas;
- Food security & Poverty alleviation;
- Improvement of human & animals health (One Health);
- Enhancement of livestock & agricultural production & productivity;
- Use of animal traction (draught power & transport);
- Introduction & development of mixed farming;
- Market access, economic growth



# PATTEC Initiative

Aim to contribute to: (1) MDGs goals; (2) CAADP pillars; (3) Department of Rural Economy and Agriculture's Strategic and Operational plans & (4) AUC Agenda 2063

Establish PATTEC Coordination Technical & Scientific Office of DREA at AUC HQ

## Main activities

- Advocacy, awareness creation;
- Capacity building & Training;
- Consulting & Mediating;
- Supports to MS; T&T eradication projects proposals & appraisals, consultancies....;
- Resources mobilization;
- Policy and standards among others.





# Advocacy & awareness creation

- Elaboration and printing of Information and awareness material: calendars and planning tools;
- Contribution to TTI Bulletin;
- Articles/manuscripts on T&T (Print and electronic media);
- Note on T&T impact on Africa Agriculture and Economy, as contribution to preparation of 7<sup>th</sup> Joint AU Conference of Ministers of Economy & Finance & ECA Conference of African Ministers of Finance, Planning & Economic Development held in March 2014, Abuja, Nigeria; on "Industrialization for inclusive & transformative development in Africa";
- Production and distribution of Advocacy materials;
- Meetings with higher officials in Angola, Cameroun, Equatorial Guinea, Kenya, Zambia, Zimbabwe, Ethiopia



# Capacity building & Training

Technical & managerial being carried out at countries' level

- Methodology / Area wide principles;
- Field & laboratory techniques;
- Project management and execution;
- Training of Communities' members.

Institutional: (collaboration with IAEA)

Construction of insect rearing facilities (Ethiopia & Burkina Faso)

Small insectaries (Uganda, Zimbabwe, Senegal, SA,...)

Human, material & technical supports





# Capacity building and training

- 23 French speaking Experts/ technicians from 17 countries in planning and execution of PATTEC projects;
- Open Source Quantum GIS application in T&T operations of 24 participants from 13 English and 15 (15) French speaking countries, during joint AU-PATTEC-IAEA-FAO Training Courses in Addis Ababa 2014 and Vienna 2015;
- Open source QGIS for 34 technicians Gabonese experts;
- Joint AU-PATTEC-FAO GIS & Data management for 28 counties' representatives of T&T projects, Kenya;
- Joint AU-PATTEC-FAO on GIS-based planning approach for 14<sup>th</sup> Ghanaians;
- AU-PATTEC staff tin new AUC internal administrative & management system (SAP); Leadership, etc.





# Supports to affected countries

•**Kenya:** Follow up on cooperation between KARI-TRC & KENNTEC, (T&T eradication proposal in Galana Area); participated in Stakeholder Workshop on Research needs in Conservation areas;

•**Uganda:** Participated in COCTU in Round Table Meeting on T&T Research & interventions; follow up of SOS consortium meeting held in Khartoum, Sudan & validation & appraisal of T&T Project submitted to BADEA;

•**Ethiopia:** Received Engineer Van Moravek of Slovakia within framework of IAEA technical support; Monitoring & Evaluation, Media representatives' visit;

•**Chad:** Participated in validation & launch of FIND HAT Diagnostic Ndjamenana;

•**Gabon:** T&T project review, 2014/15 Work plan's validation and GIS training;

•**Cameroon:** PATTEC Project review & Validation, GIS training workshop



# Other activities & Studies



- Participated in
  - AU-IBAR meetings, workshops, etc. in Kenya;
  - 9<sup>th</sup> meeting of the GF-TAD – Africa SC, Burkina Faso;
  - Technical Group process of adopting common Africa positions regarding animal health standards, guidelines & recommendations, Kenya;
  - SADC – LTC meeting, Botswana;
  - CEBEVIRAH strategic plan validation's workshop, Cameroon;
  - Elaboration of draft Policy framework on integrating T&T programmes in Rural Development Strategies;
  - GIS paper on Risk-based approaches to demonstrate presence or absence of tsetse flies: The Niger case study.





# M&E, Reporting

- M&E mission to Uganda for activities, review and progress assessment (August, 2014)
- M&E mission to STEP project field operation and visit to Kality Insectarium with RFI and France 24 journalist team, filming the whole process for a future advocacy material to be published.
- PATTEC activities review during courtesy, technical or working visits in Angola, Burkina Faso, Cameroun, Chad, Congo, Ethiopia, Equatorial Guinea, Gabon, Kenya.



# Resource Mobilization



- Technical mission to BADEA HQs, in support to Uganda T&T Eradication Project;
- Follow up & renew of AU-PATTEC request for two training & Capacity Building sessions' funding by BADEA;
- Participate in 2<sup>nd</sup> conference of Arab & AUC Ministers of Agriculture Food security in Saudi Arabia (Resolution to create Tsetse free areas in 1 million Km sq by 2025);
- Participated in Arab-African Economic Forum, Kuwait (partnership to create tsetse free areas for joint agriculture and livestock programmes;
- Establishment of cooperation platform with effective resource mobilization with BADEA;
- Gift of Zero Flies Nets, by Vestergaard, to few PATTEC members states: DRC, Chad, Sudan, Ivory Coast, Niger;
- Contact with BMGF



# Partnerships & Collaboration



- FAO Project Technical review & planning workshop (Secondment of FAO expert to AU-PATTEC);
- Strategic discussions on IAEA's support to T&T affected countries/Ethiopia with Mr. Kwaku Aning, DDG-TC;
- Courtesy call of M. Jozef CIBULA, Ambassador of Slovakia to Ethiopia and AUC and discussions on support to PATTEC Initiative;
- 1<sup>st</sup> WHO Stakeholders Meetings on *Gambiense* HAT Elimination and *Rhodesiense* HAT Geneva (WHO workshop declaration on HAT elimination, in which the vector role of tsetse fly is now fully & clearly recognized);
- Visits & meetings with FIND & Vestergaard-Frandsen Merial/Sanofi and CEVA.



# Partnerships & Collaboration



- Annual meeting of NTTAT Group;
- 82<sup>nd</sup> OIE World General Assembly of delegates;
- Fruitful partnership discussion between PATTEC, IAEA & CIRAD – Secondment of CIRAD scientist to AU-PATTEC;
- Initiated Partnership Mission to WHO Afro , Brazzaville (May 2014);
- Successfully participated to AU Malabo Summit on Agriculture and Food Security (June-July 2014);
- Organized a PATTEC Consultative workshop, on Strategies, Recent Technical Advances and Mechanisms for Creating Effective Partnerships in T&T Management in Livingstone, Zambia (Sept.).



# Partnerships and Collaboration



- Participated to Africa Week of Innovative Action Against Hunger, Ethiopia;
- Meetings of LIDESA Process guiding Group and Continental Workshop, Kenya;
- STIPH - TAG of Eradication Investment Cases for Ochocercosias, LF & HAT Project, (New Orleans, USA);
- Host Agreement review & signing for PATTEC national Coordinators/Focal Points & SC Meetings, Harare, Zimbabwe;
- ISTRC Council meeting, Harare;
- GALVmed - Trypanocides QC meeting at IAEA in HQs, Austria;
- Regional (Mozambique, South Africa & Swaziland) T&T Project Meeting, South Africa;
- News and Renewals of MOUs with FIND, WHO, OIE, CIRDES, etc.



# Management & Supervision



- Coordinated the development of the AU-DREA 2014-2017 Strategic and Operational Action Plans
- Participated in DREA mid-term review and planning retreat;
- Contributed to the Livestock Development Strategy for Africa;
- Participated in DREA management team meeting
- Regular planning & review of PATTEC Office's activities;
- 13<sup>th</sup> PATTEC National Coordinators/Focal Points;
- 3<sup>rd</sup> SC meeting in Harare, Zimbabwe;
- ISCTRC Council members' meeting





# Important recommendations

- Resolutions of AU- MS' Ministers of Livestock Conference, Abidjan (April 2013) -: OIE General Assembly to work & Tsetse & Non-Tsetse Transmitted Trypanosomosis & to set up - OIE Specialist Commission/ Ad-hoc Group on T&T;
- 32<sup>nd</sup> ISCTRC Conference , Khartoum (Sept.2013) -: AU-PATTEC to consider widening its agenda on T&NTTAT;
- 2<sup>nd</sup> Afro-Arab Ministerial meeting on Agriculture & FS, Riyadh (Oct. 13) -: Arab, African & International funding institutions to contribute for the creation of one Mil. Km<sup>2</sup> by 2025 & ultimately eradication of T&T.



# Important recommendations

- PATTEC Consultative workshop, on Strategies, Recent Technical Advances & Mechanisms for Creating Effective Partnerships in T&T Management Zambia (Sept. 14) -; AU- PATTEC to work on NTTAT & seek OIE to establish an Adhoc Group on T&NTTAT;
- 12<sup>th</sup> & 13<sup>th</sup> PATTEC Coordinators & Focal Points, Dakar (2013) & Harare (2014) respectively -: AU-PATTEC to consider working on creation of T&NTTAT free areas' strategies with support of OIE & IAEA
- GALVmed Trypanocid Quality control Workshop, Vienna (Jan. 15) -: AU-PATTEC to request OIE delegates to use LACOMEV/Dakar & TDFA/Dar.





## Draft resolution on the adoption of standards for certifying areas free from tsetse and non-tsetse transmitted animal trypanosomosis and their vectors

**Concerned** about the continued presence of tsetse and non-tsetse transmitted animal trypanosomosis and their vectors as well as their negative socio-economic and rural development impacts in large parts of Sub Saharan Africa;

**Recognizing** the commitment of the African Heads of State and Government to concerted efforts aimed at eradicating the scourge of tsetse and non-tsetse transmitted animal trypanosomosis and their vectors;

**Recognizing** the mandate of the African Union PATTEC to coordinate T&T intervention efforts on the African continent;

**Encouraged** by the diversity and appropriate competences of the partners that are involved in the fight against tsetse and non-tsetse transmitted animal trypanosomosis and their vectors;





**Encouraged** by the diversity and appropriate competences of the partners that are involved in the fight against tsetse and non-tsetse transmitted animal trypanosomosis and their vectors;

**Recognizing** the objectives and importance of the MOU signed between OIE and the AU-PATTEC on collaboration in the fight against tsetse and non-tsetse transmitted animal trypanosomosis and their vectors;

**Anxious** about the inefficacy, the resistance of trypanosomes to trypanocids and their widespread use by non-qualified personnel to disrupt the efforts and gains of Trypanosomosis affected countries implementing the PATTEC Initiative

**Concerned** about the lack of OIE recognized international standards on certifying areas free from tsetse and tsetse non-transmitted animal trypanosomosis and their vectors;

**Inspired** by the availability of technically feasible and environmentally acceptable techniques and strategic control options for the management of tsetse and non-tsetse transmitted animal trypanosomosis and their vectors;





## The 21<sup>st</sup> Conference of the OIE Regional Commission for Africa:

**Endorses** the initiative to formally adopt standards for certifying areas free from tsetse and tsetse transmitted trypanosomosis and their vectors

**Urges** the OIE World Assembly to establish an Ad Hoc Group on standards for certifying areas free tsetse and tsetse transmitted animal trypanosomosis and their vectors

**Urges** the OIE World Assembly to accelerate the process of adopting standards for certifying areas free from tsetse and tsetse transmitted animal trypanosomosis and their vectors.



# Stakeholders' participation in PATTEC



21th Conference of OIE RC for Africa, 16 – 20.2.2015. Rabat, Morocco

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21th Conference of OIE RC for Africa, 16 – 20.2.2015. Rabat, Morocco



# Thank you and our

## Partners and relevant stakeholders



## Useful links on T&T

1. <http://www.rfi.fr/emission/20141119-ethiopie-deme-eradication-mouches-tsetse-males-steriles/>
2. <http://www.franceinter.fr/emission-un-jour-dans-le-monde-diplomatie-de-club-avec-bertrand-badie>
3. [L'éradication de la mouche tsétsé en Ethiopie / France Inter](#)

[L'éradication de la mouche tsétsé en Ethiopie / France I...](#)

Quelle population Thomas Cherenet peut-il bien nourrir de sang ? Et bien, il s'agit de mouche tsétsé. Car oui, l'Ethiopie élève des mouches tsétsés. L'insecte ravag...

[Afficher sur www.franceinter.fr](#) Aperçu par Yahoo

4. <http://news360.com/article/273437664>
5. The Economist | The tsetse fly and development: In the ointment  
<http://www.economist.com/news/finance-and-economics/21639588-how-insect-held-back-continent-ointment?frsc=dg%7Cd> via @theeconomist

Communiqués de presse FAO/AIEA (le projet va aussi être présenté au prochain FAO Council 23-27 March 2015):

<http://www.fao.org/news/story/en/item/211898/icode/>

<http://www.un.org/apps/news/story.asp?NewsID=46905#.VMUZCieZn2M>

<http://www.unmultimedia.org/radio/english/2014/04/eradication-of-tsetse-fly-in-senegalese-region-by-2016-un-agencies/#.VMUaKCeZn2M>

<http://www-naweb.iaea.org/nafa/news/2014-tsetse-senegal.html>



Communiqués de presse médias sur le projet:

<http://www.rfi.fr/afrique/20140122-senegal-lutte-mouches-tse-tse-trypanosomiase-radiations-betail-niayes-sommeil/>

<http://www.la-croix.com/Actualite/Monde/Vers-une-eradication-de-la-mouche-tse-tse-au-Senegal-2014-01-21-1094242>

Et les communiqués de presse suite à notre publication dans PNAS:

<http://www.natureworldnews.com/articles/8114/20140717/abolishing-tsetse-fly-carrier-of-deadly-sleeping-sickness.htm>

[http://scicasts.com/disease-processes/1872-medical-microbiology/8177-eradicating-fatal-sleeping-sickness-by-killing-off-the-tsetse-fly/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%253A%2520scicasts%252Fnews%2520%2528Breaking%2520Sci-Tech%2520News%2520%257C%2520Scicasts%2529](http://scicasts.com/disease-processes/1872-medical-microbiology/8177-eradicating-fatal-sleeping-sickness-by-killing-off-the-tsetse-fly/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%253A%2520scicasts%252Fnews%2520%2528Breaking%2520Sci-Tech%2520News%2520%257C%2520Scicasts%2529)

<http://www.psmag.com/nature-and-technology/big-data-helping-kill-biting-insects-spread-disease-86265>

<http://phys.org/news/2014-07-ecologist-eradicate-fatal-sickness.html>

[http://www.sciencedaily.com/releases/2014/07/140717094947.htm?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+sciencedaily+%28Latest+Science+News+--+ScienceDaily%29](http://www.sciencedaily.com/releases/2014/07/140717094947.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+sciencedaily+%28Latest+Science+News+--+ScienceDaily%29)

