

Swiss TPH Winter Symposium 2017

Helminth Infection – from Transmission to Control

7-8 December 2017, Parterre Rialto, Basel, Switzerland

Swiss TPH 
Swiss Tropical and Public Health Institute
Schweizerisches Tropen- und Public Health-Institut
Institut Tropical et de Santé Publique Suisse
Associated Institute of the University of Basel

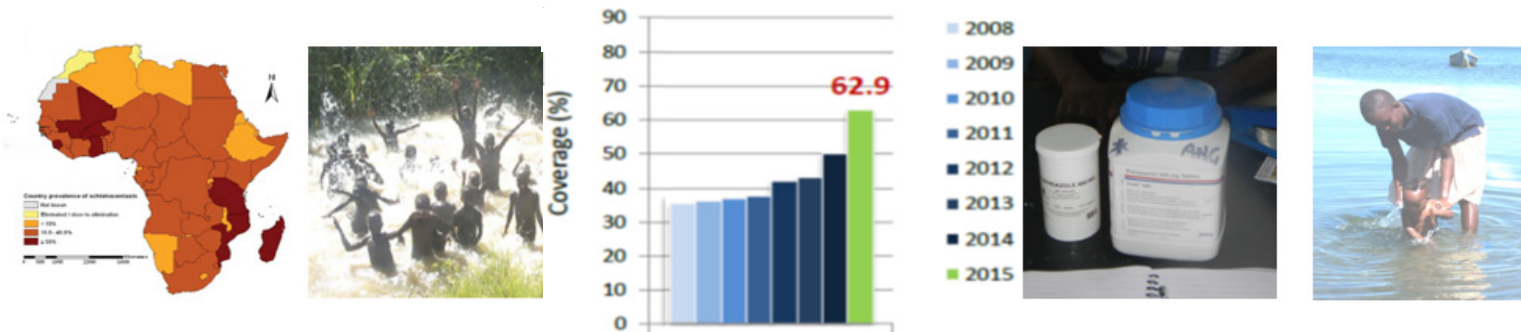
COUNTDOWN on WHO 2020 Targets: A focus on helminthiasis

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Twitter: @StothardRuss & @countdownntds



Background

Background on NTD control landscape

- from 2002 onwards to 2030 perspectives

Introducing COUNTDOWN implementation research

- why are multi-disciplinary approaches needed?

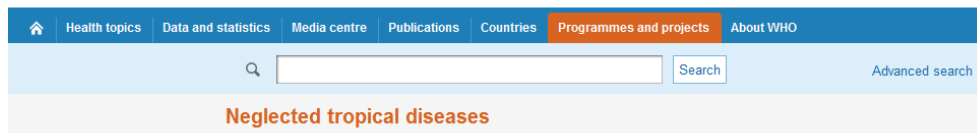
Focus on schistosomiasis & soil-transmitted helminthiasis

- issues about scale-up and accelerating towards targets

Several NTDs are amenable to preventive chemotherapy

- Preventive chemotherapy (PC) is a rapid impact 'health' package (i.e. tool ready)
- Donated medicines, promoted access, often with integrated drug administration(s)
- PC typically a 'vertical-programme' although may use 'horizontal-platforms' at periphery

Preventive chemotherapy in human helminthiasis



Neglected tropical diseases

Diseases

Preventive chemotherapy and transmission control

Innovative and intensified disease management

Vector ecology and management

Neglected zoonotic diseases

WHO's Executive Board recommends resolution on all 17 neglected tropical diseases



© WHO
WHO's Executive Board recommends adoption of a resolution on all 17 NTDs

29 January 2013| Geneva

The 132nd Executive Board of the World Health Organization (WHO), meeting in Geneva, Switzerland today recommended to the 66th Health Assembly a resolution on all 17 neglected tropical diseases.

The move now clears the way for its adoption by the World Health Assembly – the decision-making body of WHO – when it convenes in Geneva, Switzerland in May 2013.

[Full details](#) | [Executive Board resolution on NTDs](#)

[World Health Assembly \(WHA\) Resolutions on Neglected Tropical Diseases: 1948–2012](#)

Coordinated use of anthelmintic drugs in control interventions:

a manual for health professionals and programme managers



2020 challenges – scale-up, performance, impact, demand & sustainability

Preventive chemotherapy becomes the front-line tool



Global



Regional

National

District

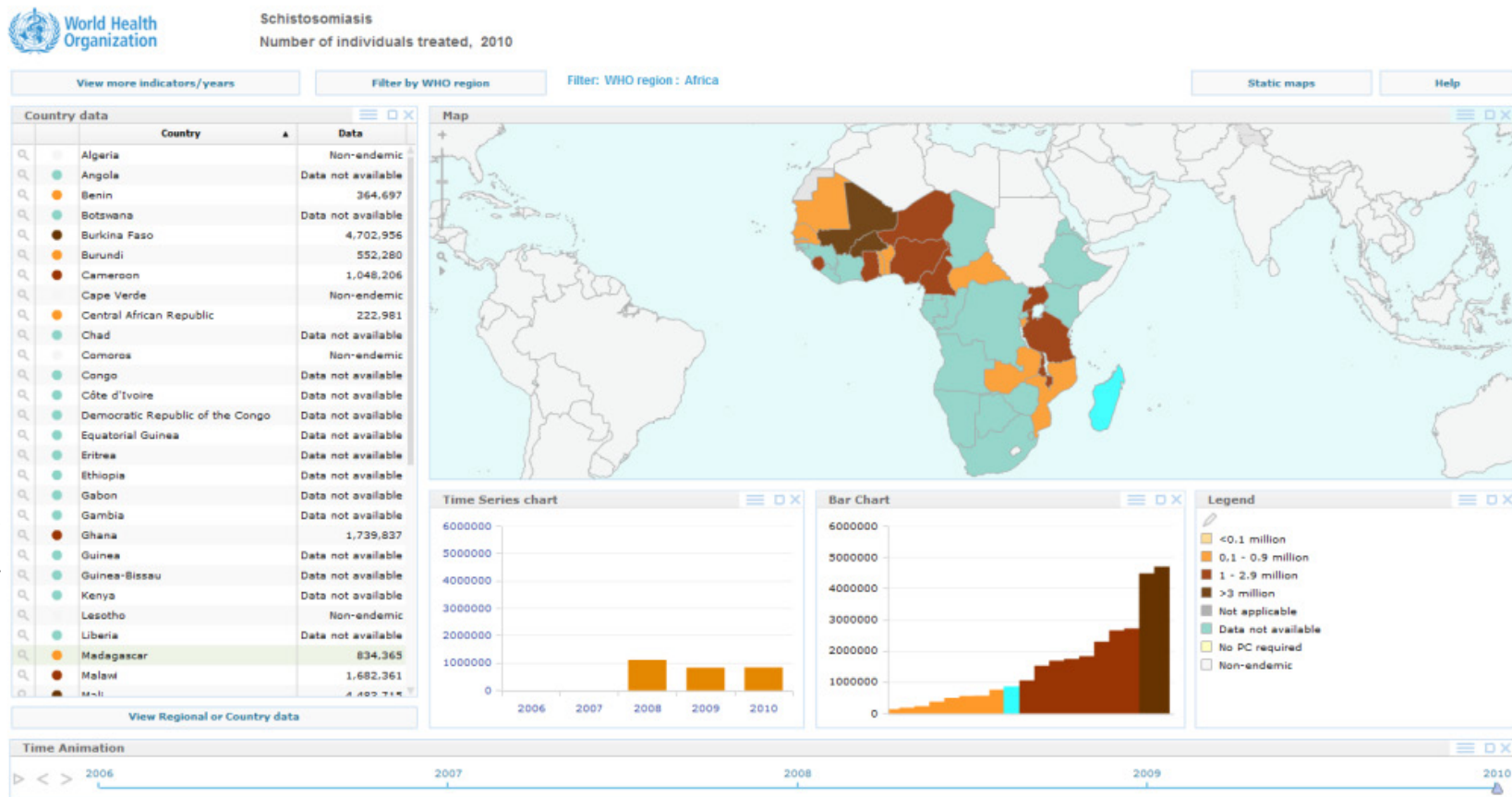
Community



Actual treatment coverage (year on year)

homogeneous or heterogeneous respondents?

an important indicator but only a proxy of impact



From 2010 the estimates of the number of individuals requiring preventive chemotherapy for schistosomiasis has been revised.

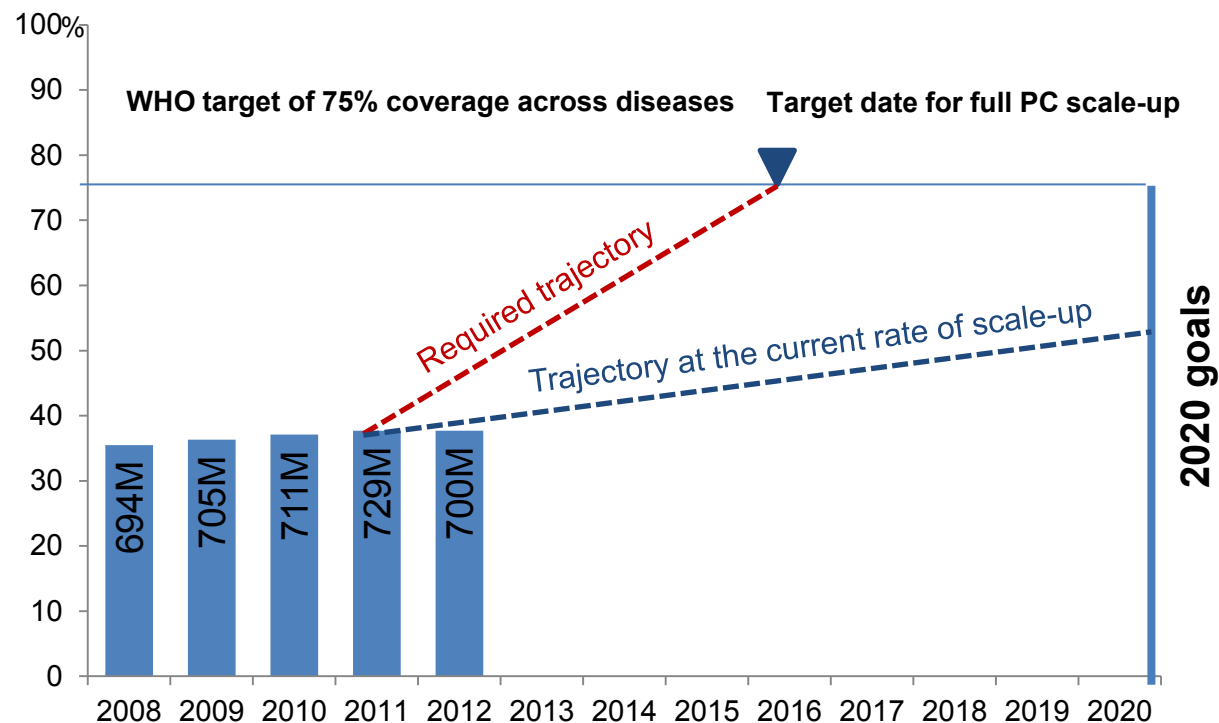
Details on methodology are available - Schistosomiasis: population requiring preventive chemotherapy and number of people treated in 2010. WER, No 4, 2012

© WHO 2011. All Rights Reserved. Map Disclaimer.

WHO's scale-up of future PC to reach 2020 targets

Projected % of people receiving PC for at least one disease

(including LF, ONCH, SCH and STH) out of the total number that require PC



**Urgent need to
address bottlenecks in
scale-up of PC**

and

**to accelerate towards
WHO 2020 targets**

The development of the NTD scorecard

4th NTD scorecard shows un-even progress across diseases

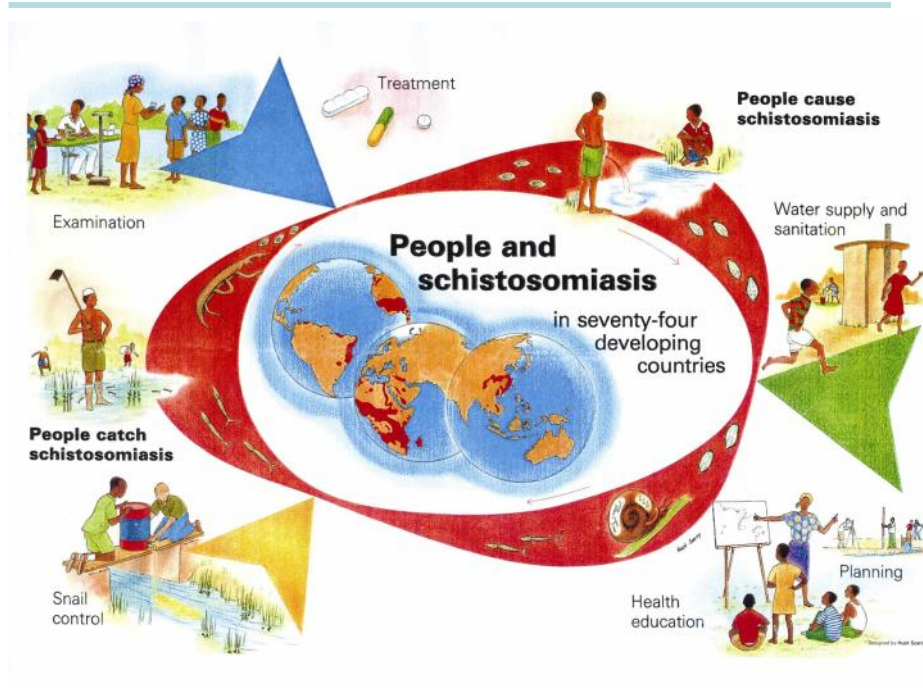
London Declaration NTDs		Coverage and Impact Milestones	Program Support Milestones	Drug Requests Filled	Research	Progress Reports			
						1st	2nd	3rd	Current
PREVENTIVE CHEMOTHERAPY	LYMPHATIC FILARIASIS	2	2	1	1	2	2	2	2
	ONCHOCERCIASIS	2	3	1	2	1	2	2	3
	SCHISTOSOMIASIS	3	4	1	3	2	3	3	3
	SOIL-TRANSMITTED HELMINTHS	1	1	1	2	2	2	1	1
	TRACHOMA	2	1	2	2	2	1	1	2

4th NTD scorecard shows un-even progress across diseases

Three reasons why schistosomiasis is placed in the RED?

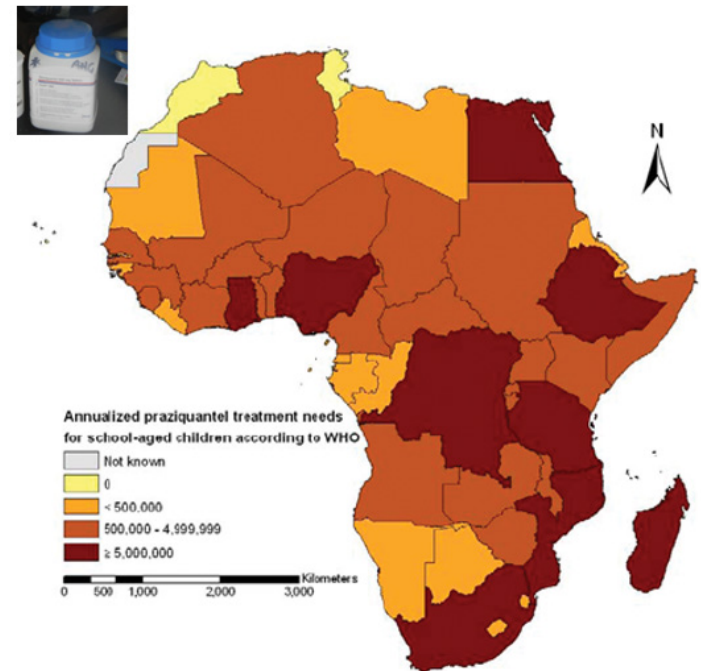
First

PC is not a complete solution



Second

PC stretches health system performance



4th NTD scorecard shows un-even progress across diseases

Three reasons why schistosomiasis is placed in the RED?

Third

Policies & practices are lagging behind technology, especially at micro-spatial



278210 OMS CH
DR LORENZO SAVIOLI
SCHISTOSOMIASIS CONTROL PROGRAMME

11471 CONGRATULATIONS STOP THIRD SURVEY RESULTS SHOW OBJECTIVES
OF 65 PERCENT REDUCTION OF HEMATURIA AND 90 PERCENT REDUCTION OF
VISUAL WITHIN ONE YEAR INSTEAD OF TWO YEARS REPEAT INSTEAD OF TWO
YEARS STOP YOU MAY CONTACT C. HATZ THROUGH SWISS EMBASSY
DARESSALAAM ATTENTION C. HATZ VIA RADIO HELVITAS 41322 TELEX STOP
SWISS EMBASSY TELEPHONE 67801 OR PO BOX 2454 STOP MAKE
ARRANGEMENTS DIRECTLY STOP REGARDS
MOTT UNISANTE GENEVA
13/04/88 0935 GMT



<https://score.uga.edu/>

ZEST - Zanzibar Elimination of Schistosomiasis Transmission

Infectious Diseases of Poverty

SCOPING REVIEW

Open Access

Elimination of schistosomiasis: the tools required

Robert Bergquist¹, Xiao-Nong Zhou^{2*}, David Rollinson³, Jutta Reinhard-Rupp⁴ and Katharina Klohe⁵



SCOPING REVIEW

Open Access

Moving from control to elimination of schistosomiasis in sub-Saharan Africa: time to change and adapt strategies

Louis-Albert Tchuem Tchuente^{1,2*}, David Rollinson³, J. Russell Stothard⁴ and David Molyneux⁴



4th NTD scorecard shows un-even progress across diseases

and more widely

the NTD implementation landscape is becoming more

dynamic (*parasite/human/vector*)

complex (*mixed targets*)

fragmented (*communications*)

and

fatigued (*donors*)

The 2016 NTD intervention landscape

Since 2002 it has changed and grown to be complex

- *'Donated' drug deliveries with different treatment schedules*
- *Mixed agenda: control (morbidity) to elimination (transmission)*



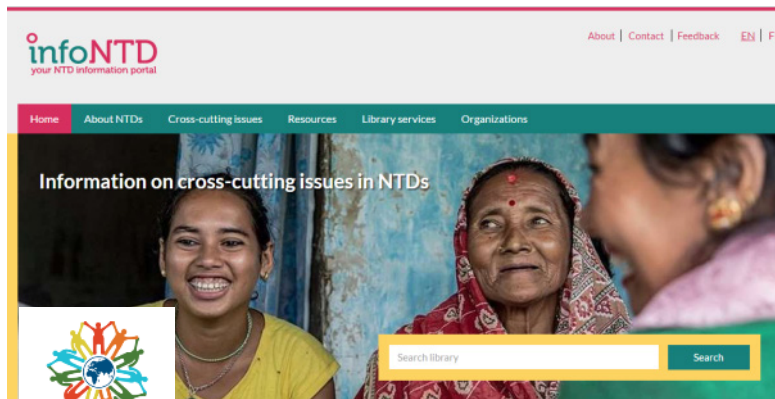
NTD intervention landscape

Flux of stakeholders & interests



www.who.int/topics/schistosomiasis/

<https://www.infontd.org/>

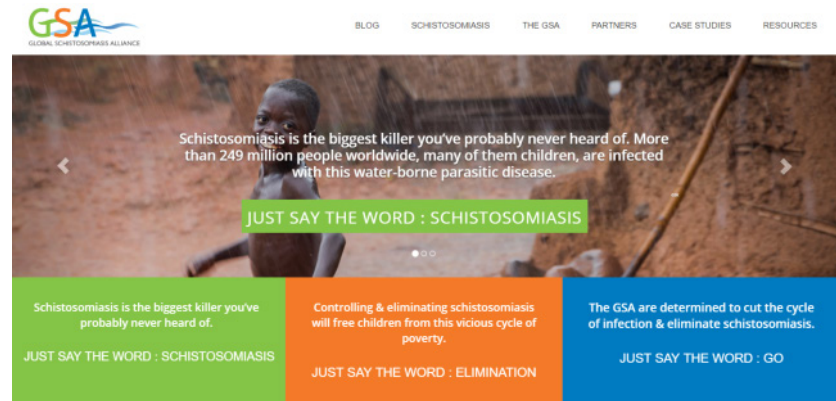


Partners Map



Disease focused (pharmaceutical industry)

<http://eliminateschisto.org/>







An A to Z of agencies

Alliance for Disability-Inclusive Development (ADID)

WVI - World Vision International

TABLE 2016 Donor Support for NTD Treatments by Disease

																					
REGION	COUNTRIES	SCH	STH	TR	LF	Oncho	TR	SCH	STH	TR	LF	Oncho	TR	SCH	STH	LF	Oncho	TR	SCH	STH	
AFRO	Angola	-	-	-	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	
	Benin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	●	●	●
	Burkina Faso	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	●	●	●	●
	Burundi	-	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cameroon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	●	●	●
	Central African Republic	-	-	-	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-
	Chad	-	-	-	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-
	Congo	-	-	-	-	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-
	Côte d'Ivoire	-	-	-	●	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●
	DR Congo	-	-	-	●	●	-	●	●	-	●	●	-	●	●	●	●	●	●	●	●
	Egypt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Equatorial Guinea	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Eritrea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ethiopia	●	●	-	-	-	-	●	●	●	-	●	-	●	●	●	●	●	●	-	●
	Gabon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Gambia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ghana	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	●	●	●	●
	Guinea	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	●	●	●	●
	Guinea-Bissau	-	-	-	-	●	●	-	-	-	-	●	●	-	-	-	-	-	-	-	-
	Kenya	●	●	-	●	-	-	-	●	●	●	-	-	-	-	-	-	-	-	-	-
	Liberia	-	-	-	-	-	-	-	●	●	-	●	-	-	●	●	-	-	-	-	-
	Madagascar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mauritania	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
	Malawi	-	-	-	-	●	-	-	-	-	●	●	-	-	●	●	-	-	-	-	-
	Mali	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	●	●
	Mozambique	-	-	-	-	-	-	-	-	-	-	●	-	-	●	●	-	-	●	-	-
	Namibia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Niger	-	-	●	-	●	-	-	-	-	-	-	-	-	●	●	●	-	●	●	●
	Nigeria	-	-	-	●	●	-	-	●	●	-	●	●	●	●	●	●	●	●	●	●
	Rwanda	-	-	-	-	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-
	Senegal	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	●	●	●	●	●
	Sierra Leone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	●	●
	South Sudan	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tanzania	-	-	●	-	-	-	-	-	-	-	●	-	-	●	●	●	●	●	●	●
	Togo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	●	●
	Uganda	-	-	-	-	-	-	-	-	-	-	●	●	-	●	●	●	●	●	●	●
	Zambia	-	-	-	●	-	-	-	-	-	-	●	-	●	●	●	-	-	-	-	-
	Zimbabwe	-	-	-	●	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-

COUNTDOWN
Calling time on Neglected Tropical Diseases

← Cameroon

← Ghana

← Liberia

← Nigeria

Introducing COUNTDOWN, an implementation research consortium for PC NTDs

Reducing poverty in SSA with implementation science for NTD control

In 2008, DfID committed £50M for to support control of NTDs

Implementation portfolio including:

Sightsavers (Trachoma)

Schistosomiasis Control Initiative (ICOSA)

Centre for NTDs (LSTM)

UNITED (Nigeria)

....with The Research and Evidence Division supporting

Programme of implementation research to inform the effective and sustainable scaling-up of integrated Neglected Tropical Disease (NTD) control initiatives

OJEU: 2013/S 181-312697

Open tender: one final application for £8M in the Nov. 2014 - Oct. 2019 period

COUNTDOWN

- Working in Liberia, Ghana, Nigeria & Cameroon
- Active research uptake/communications & 5 main research themes

COUNTDOWN

Calling time on Neglected Tropical Diseases



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COUNTDOWN at Swiss TPH Winter Symposium - 7-8 December 2017 - Basel, Switzerland

07 December 2017

The Swiss TPH Winter Symposium 2017 on Helminth Infection - from transmission to Control.



The 2017 British Society for Parasitology Autumn Symposium on 28th September

28 September 2017

The Multidisciplinary of Parasitology: Host-Parasite Evolution and Control in an Ever Changing World



Don't Miss COUNTDOWN at the Keystone Symposia Conference in Durban, South Africa 10 - 14 Sept. 2017

10 September 2017

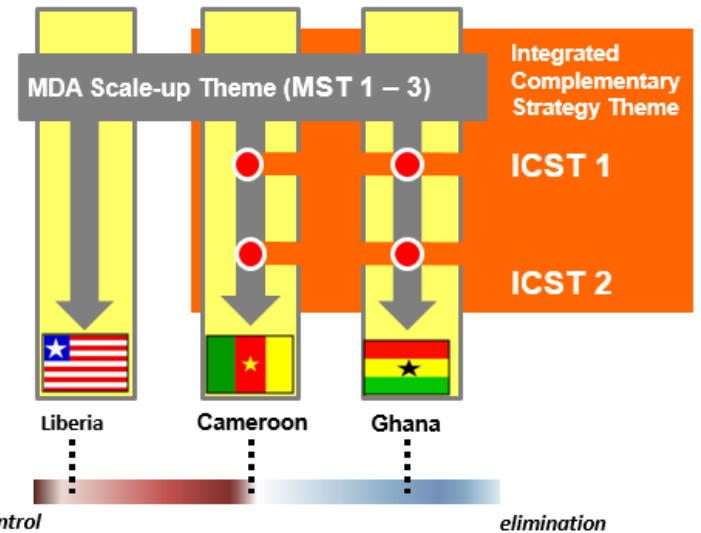
'Understanding the epidemiological and social factors of Lymphatic Filariasis persistence ten years into the MDA program: towards a successful and sus...

Tweets by @NTDCOUNTDOWN

COUNTDOWNNonNTDS Retweeted
Russell Stothard @StothardRuss
@NTDCOUNTDOWN important to sustain progress for elimination of STH

COUNTDOWNNonNTDS Retweeted
Sally Theobald @sallytheobald
Can't wait to see you in Liverpool Oct 2018! see new website & our welcome blog - @RinGsRPC @REACHOUT_Tweet @NTDCOUNTDOWN @ReBUILDRPC

COUNTDOWNNonNTDS Retweeted



scale-up in Nigeria & responsive research

Background

Background on NTD control landscape

- from 2002 onwards to 2030 perspectives

Introducing COUNTDOWN implementation research

- why are multi-disciplinary approaches needed?

Focus on schistosomiasis & soil-transmitted helminthiasis

- issues about scale-up and accelerating towards targets

2030 Ensure healthy lives & promote well-being for all at **all** ages

How do NTDs fit in across this agenda?
both **pro** and **con** aspects

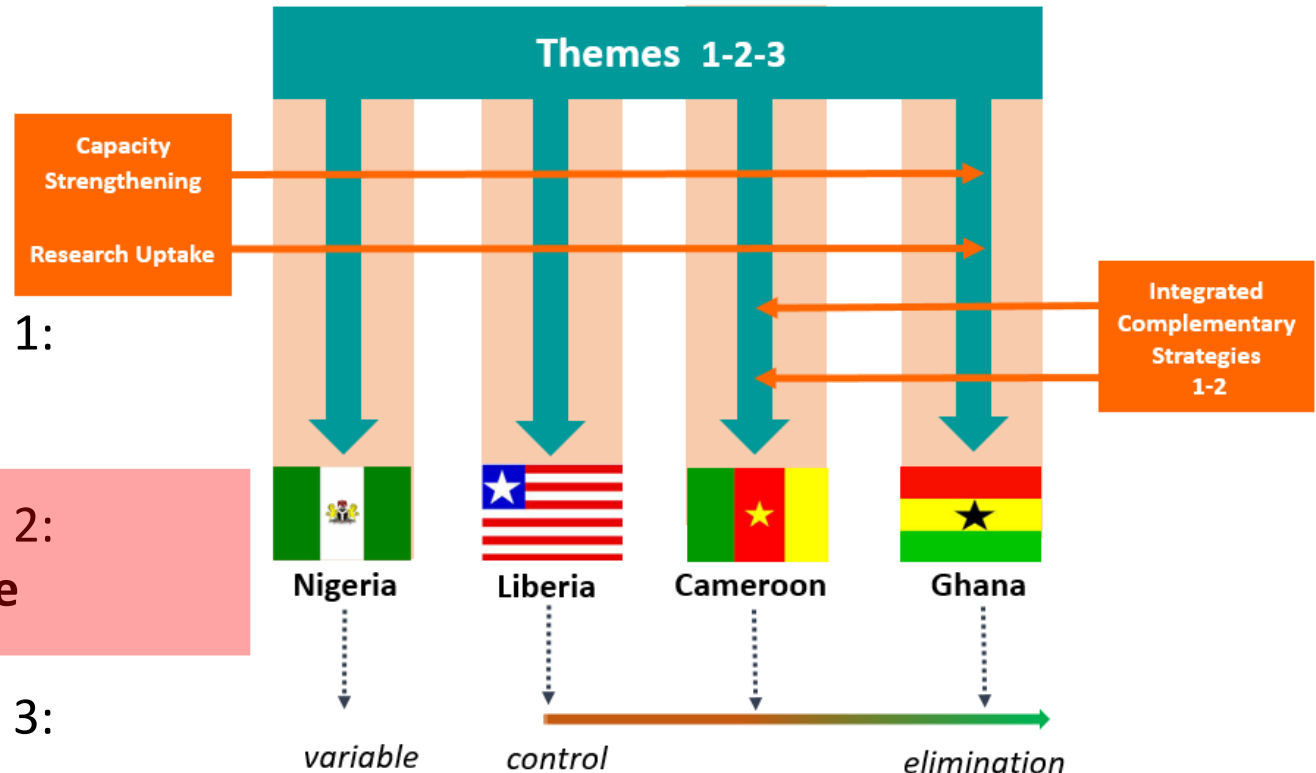


COUNTDOWN activities set across **five** major themes

Mass Scale-up Theme 1:
Evidence Synthesis

Mass Scale-up Theme 2:
Applied Social Science

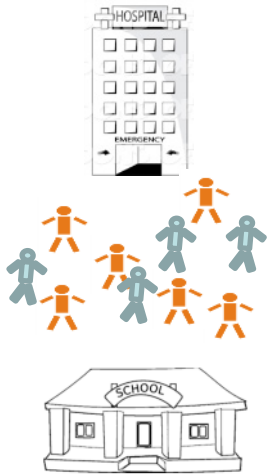
Mass Scale-up Theme 3:
Health Economics





20 years of gender mainstreaming in health: lessons and reflections for the neglected tropical diseases community

- NTD interventions need better gender programming, reporting & analysis



Fixed point approaches:
health post clinic/
distribution point
Drugs are distributed by
CDDs or health workers at a
fixed point

School-based programmes
Teachers and/or others
distribute drugs in the
schools



House to house
Community drug
distributors (CDDs)/
others visit households
to register the household
members and distribute
drugs

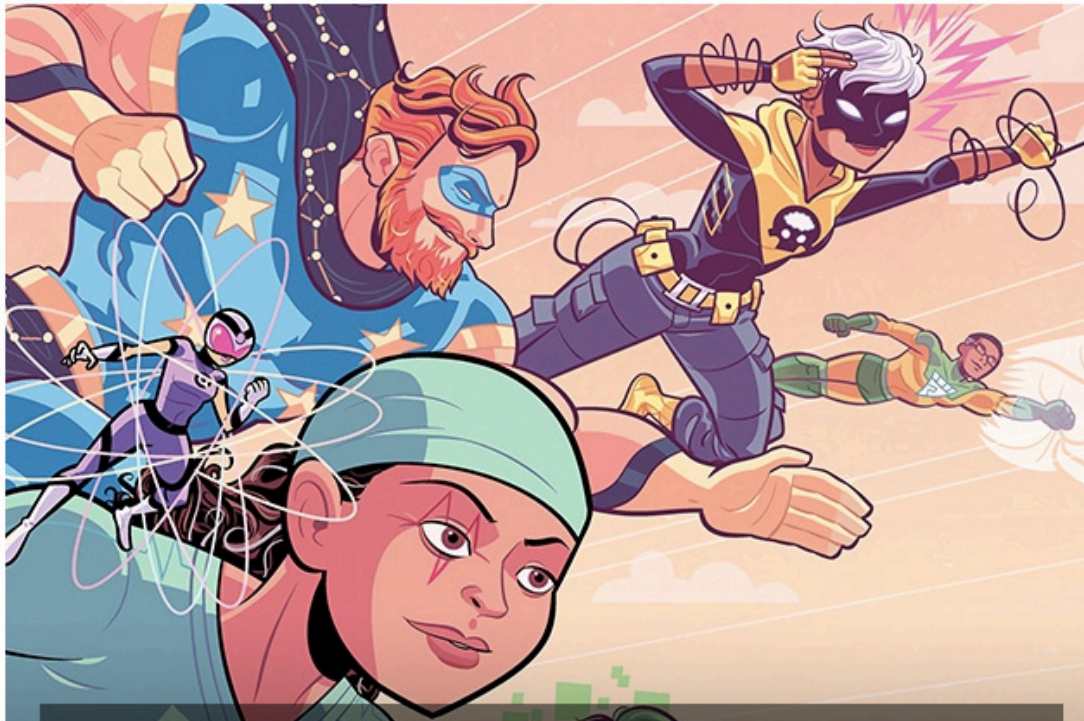
**But there are several current gaps
in gender & age-related equity
(*maternal & child health - SCH*)**

Coverage improvement
activities
for example, mop up
Additional 'pro-equity'
activities undertaken to
try to ensure everyone is
covered

Child (under 5) health/
special events
Particularly common in
the African context, drugs
are provided within these
gatherings

SPECIAL

[▶ See all specials](#)



INTERDISCIPLINARITY

Nature's special issue probes how scientists and social scientists are coming together to solve the grand challenges of energy, food, water, climate and health. This special scrutinizes the data on interdisciplinary work and looks at its history, meaning and funding. A case study and a reappraisal of the Victorian explorer Richard Francis Burton explore the rewards of breaking down boundaries. Meanwhile, a sustainability institute shares its principles for researchers who work across disciplines. Thus inspired, we invite readers to test their polymathy in our lighthearted quiz.

Multi disciplinary examples

- R F Burton FRGS
(1821-1890)



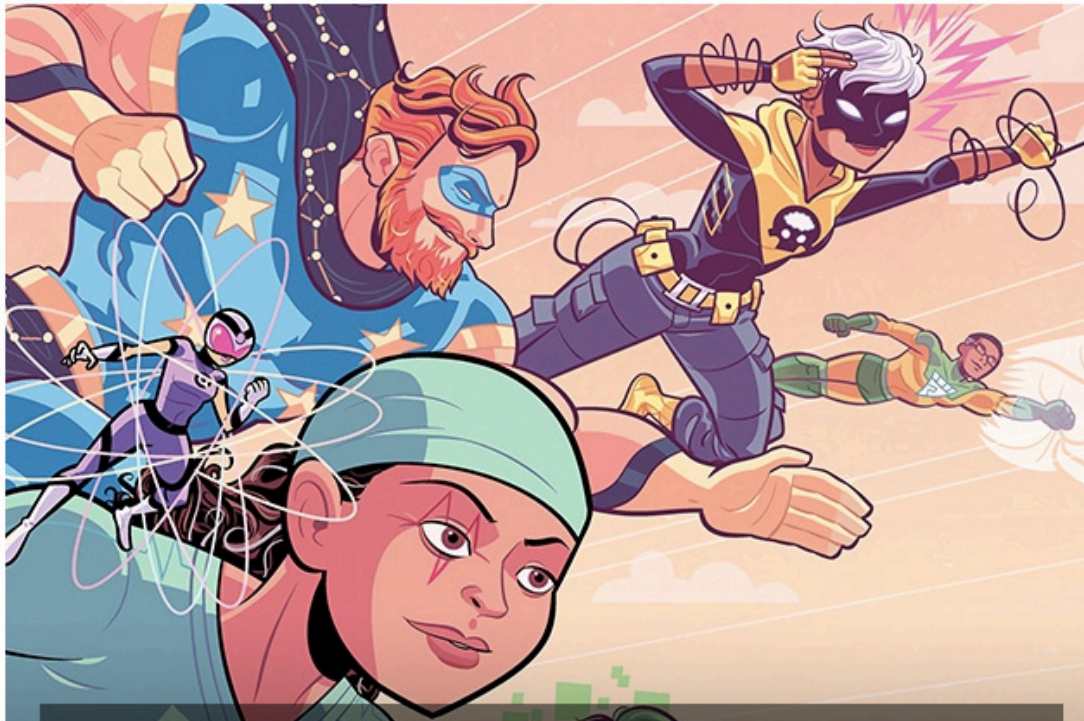
first cultural anthropologist
& cartographer of Africa

very likely had **schistosomiasis**

but still had a very **colourful** life

SPECIAL

[▶ See all specials](#)



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Breaking across boundaries
is **not easy** and requires

- at **individual**-level
patience & respect
- at **group**-level
effective communications

but

- is **very** rewarding
holistic 'team' insight
- has **broader** appeal
pragmatic outcomes

COUNTDOWN

Calling time on Neglected Tropical Diseases

Preventive chemotherapy needs intensification

COUNTDOWN

Calling time on Neglected Tropical Diseases

ABOUT COUNTRIES THEMES PUBLICATIONS NEWS CONTACT US



2009-diannestare-courtesy-of-photophare

COUNTDOWN is a research consortium dedicated to investigating cost-effective, scale-up and sustainable solutions to control and eliminate the seven most common Neglected Tropical Diseases by 2020

Latest

Question Time on Neglected Tropical Diseases (NTDs): The COUNTDOWN has begun!

19 March 2015

COUNTDOWN launches in Liverpool with a special guest from Liberia by @sci_ntds

14 March 2015

Official COUNTDOWN Launch

13 March 2015

COUNTDOWN in Nigeria

08 March 2015

Beyond 2020: A discussion on

Neglected Tropical Diseases at the Bill

The Team



Our team's expertise and knowledge spans decades and sectors. From Neglected Tropical Disease (NTD) programme managers, to research

Tweets by @NTDCO

Tweets

 Institut Pasteur
@aiderpasteur

G7 Summit : the Institut Pasteur support to the fight against neglected diseases [#NTDs bit.ly/txtvka](#)

Retweeted by COUNTDOWN

Expand

 Ohanyido
@ohanyido

Nigeria has the largest burden of tropical diseases in [#Africa](#). [#NTI](#) [@ThisIsBuhari](#) [@Global_Network](#) [#GlobalHealthAmbassador](#)

Retweeted by COUNTDOWN

Expand

CROSS-TALK

A PLACE TO SHARE NEW APPROACHES TO NEGLECTED TROPICAL DISEASES

HOME ABOUT CONTACT



QUESTION TIME ON NEGLECTED TROPICAL DISEASES (NTDS): THE COUNTDOWN HAS BEGUN!

March 19, 2015

By Susie Crossman, Liverpool School of Tropical Medicine As part of the COUNTDOWN launch we gathered together a group of international NTD experts (David Molyneux, Lorenzo Savioli, Moses Bockarie, Alan Fenwick, Margaret Gyaopong, Kamal Kar and Tim Martineau) for a lively chat on the priority areas in the response and some pressing issues that need further exploration. Our colleague Sally Theobald ably chaired the event.

- RECENT POSTS -

[Question Time on Neglected Tropical Diseases \(NTDs\): The COUNTDOWN has begun!](#)

[COUNTDOWN launches in Liverpool with a special guest from Liberia by @sci_ntds](#)

[Official COUNTDOWN Launch](#)

[COUNTDOWN in Nigeria](#)

[Beyond 2020: A discussion on Neglected Tropical Diseases at the Bill and Melinda Gates Foundation, London](#)

Follow

COUNTDOWN is a multi-country research consortium

reporting **logframe** of
impact, outcomes, outputs

COUNTDOWN

*...generates research evidence to respond to
priority information needs of NTD policy makers
and program managers*

*...supports incorporation of evidence to
improve policies and operational plans and
practices for scale-up of NTD control*

*...strengthens capacity for evidence-based
decision making and planning through learning
by doing amongst its staff, associated partners
and country based research communities*

meshed within a
theory of change
model and indicators



Dynamic NTD landscape: policies with practicalities

5-points to consider:

1. A move from a single disease to addressing multiple NTDs through a coordinated health systems approach
 2. Strategic partnerships amongst multiple stakeholders
 3. Robust and appropriate data for evidence-based action
 4. A strong equity stance and focus upon addressing poverty and achieving universal health coverage
 5. Strong women's leadership and roles in health
- Promoting community ownership is central but is dynamic sometimes, often with local complex power structures evolving as programmatic integration ensues, thus adaptive programme reflecting the realities of the communities they serve are needed

The Expanded Special Project for Elimination of Neglected Tropical Diseases (ESPEN): new directions, new opportunities

15th Jun 2016 Neglected tropical diseases Collaboration 0 comments



ESPEN Launch during WHA69



Author : Sally Theobald and Ifeoma Anagbogu

Sally Theobald is a Professor in Social Science and International Health at the Liverpool School of Tropical Medicine with a research portfolio on gender, equity and health systems. She works on the social science and health systems elements of "COUNTDOWN: Calling Time

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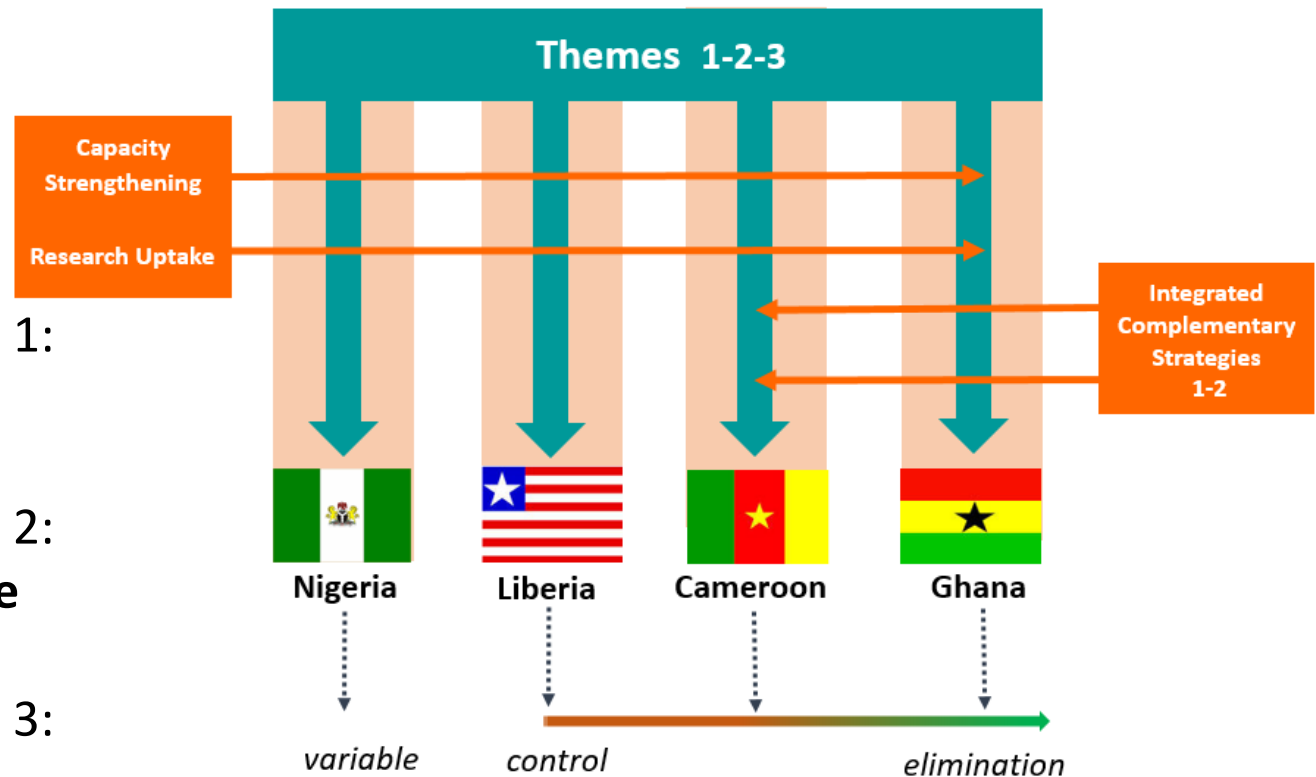
Mass Scale-up Theme 2:
Applied Social Science

Mass Scale-up Theme 3:
Health Economics

Integrated Complementary Strategy Theme 1:
Macrofilaricides & Vector Control

Integrated Complementary Strategy 2:
Schistosomiasis/STH & Diagnostics

‘access / equity’ of interventions
(better STH surveillance systems)



Better molecular surveillance for STH (& schistosomiasis)

JID 2014

Molecular Epidemiology of Ascariasis: A Global Perspective on the Transmission Dynamics of *Ascaris* in People and Pigs

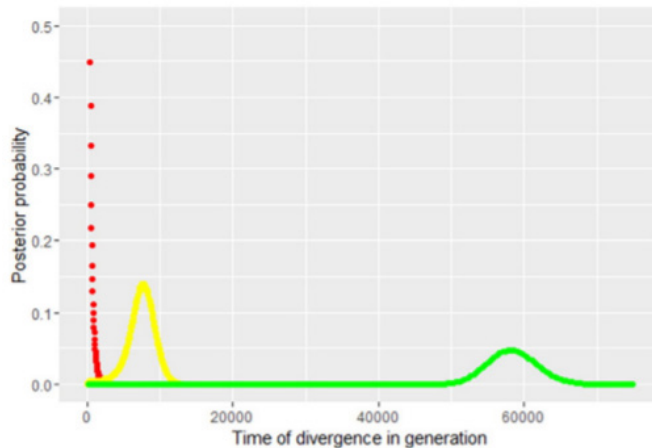
Martha Betson,^{1,4} Peter Nejsum,² Richard P. Bendall,³ Rinki M. Deb,⁴ and J. Russell Stothard⁴

¹Department of Production and Population Health, Royal Veterinary College, Hatfield, Hertfordshire, United Kingdom; ²Department of Veterinary Disease Biology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark; ³Department of Clinical Microbiology, Royal Cornwall Hospital, Truro, and ⁴Department of Parasitology, Pembroke Place, Liverpool School of Tropical Medicine, United Kingdom

IGE 2017

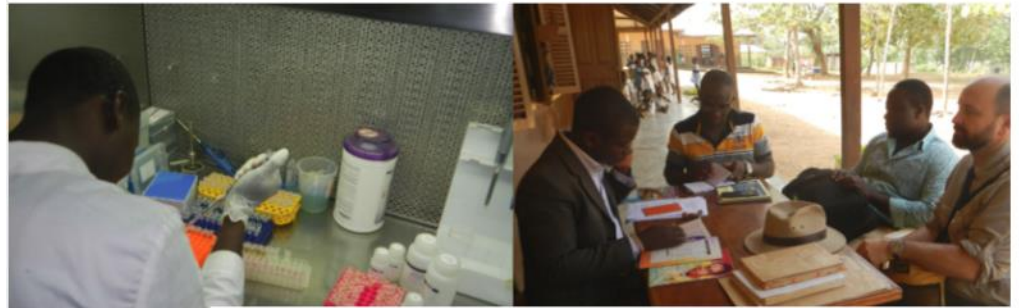
Ascaris phylogeny based on multiple whole mtDNA genomes

Peter Nejsum^{a,b,*,1}, Mohamed B.F. Hawash^{c,h,1}, Martha Betson^d, J. Russell Stothard^e, Robin B. Gasser^f, Lee O. Andersen^g



www.countdownonntds.org

<https://countdownonntds.wordpress.com>



COUNTDOWN ON DIAGNOSTICS FOR SOIL-TRANSMITTED HELMINTHIASIS AND SCHISTOSOMIASIS IN GHANA

February 17, 2016

[Leave a comment](#)

By Russell Stothard Shortly before Christmas, I had the pleasure of visiting Accra and Dodowa to discuss with the COUNTDOWN teams our research on DNA diagnostics. Previously, the surveillance of soil-transmitted helminthiasis (STH) and schistosomiasis has relied upon



THE IMPORTANCE OF GOOD PREPARATION IN QUALITY CLINICAL DIAGNOSTICS

March 4, 2016

[Leave a comment](#)

It is said that prior planning prevents poor performance, so we were pleased to be joined in Liverpool by our colleague Jaco Verweij who is supporting the qPCR workshop which will take place in Ghana later in the month. As head of the clinical molecular diagnostics facility at Tilburg, Dr Verweij has developed an automated [...]

ICST 2: Schistosomiasis/STH diagnostic surveillance platforms



PRACTICAL TRAINING IN MOLECULAR DNA DIAGNOSTICS

March 21, 2016

2 Comments

Russ Stothard, Jaco Verweij, Lucas Cunningham and Mike Osei-Atweneboana
Developing our research theme on molecular diagnostics for soil-transmitted



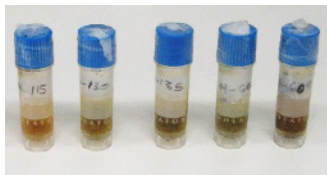
Expanding molecular diagnostics of helminthiasis: Piloting use of the GPLN platform for surveillance of soil transmitted helminthiasis and schistosomiasis in Ghana

Cunningham et al. (*in press*)

NOTE: real-time DNA diagnostics has several untapped applications
e.g. **eDNA monitoring** (WASH) or interruption of parasite transmission
clinical investigations in tissue biopsy for FGS in cervical screening

Expanding molecular diagnostics of helminthiasis: Piloting use of the GPLN platform for surveillance of soil transmitted helminthiasis and schistosomiasis in Ghana

Cunningham et al. (*in press*)



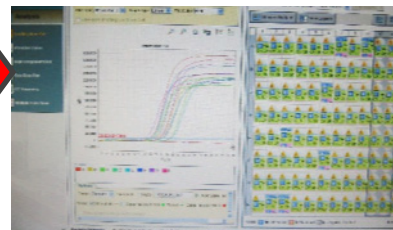
Selection of faecal samples



Bead-beating treatment of samples

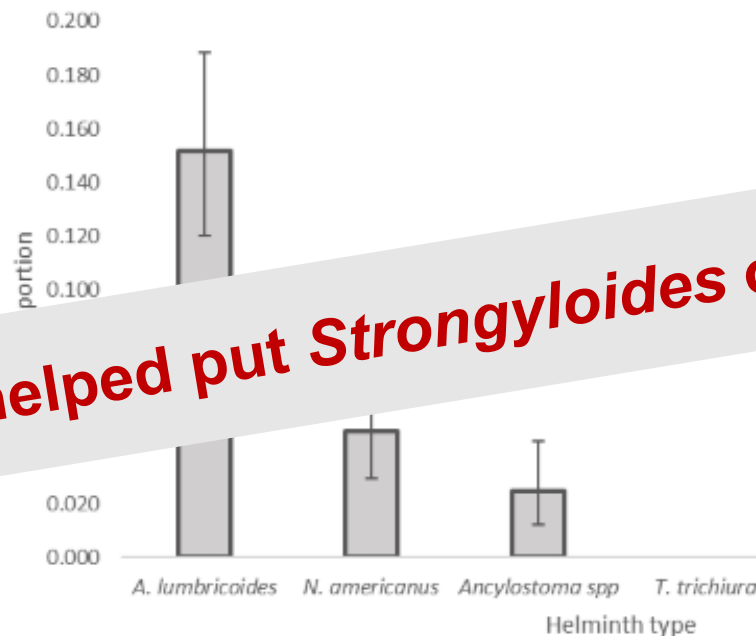


DNA extraction

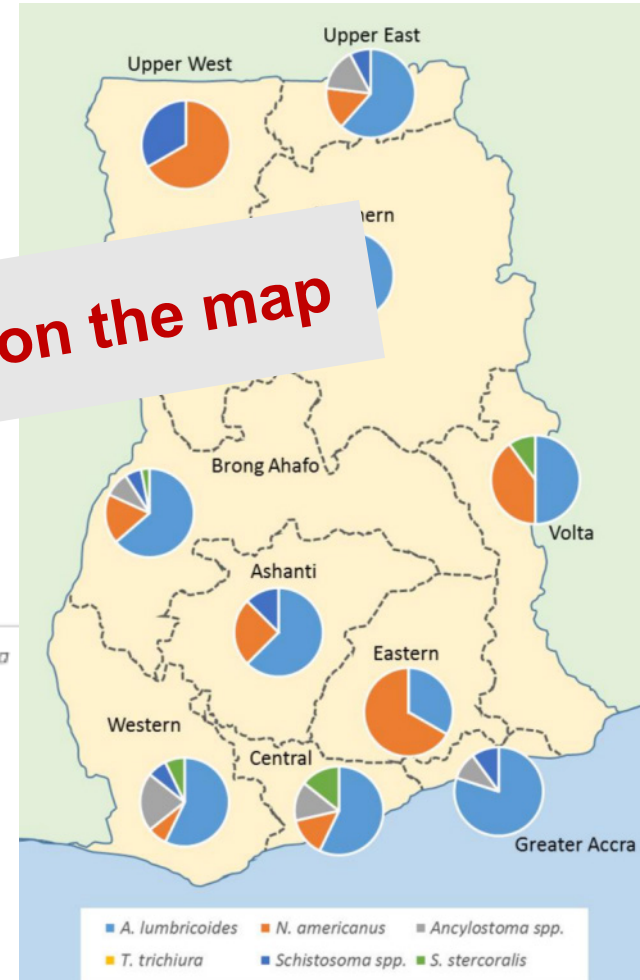


Real-time PCR analysis

Results of qPCR analysis of GPLN faecal samples



It has helped put Strongyloides on the map



COUNTDOWN activities set across **five** major themes

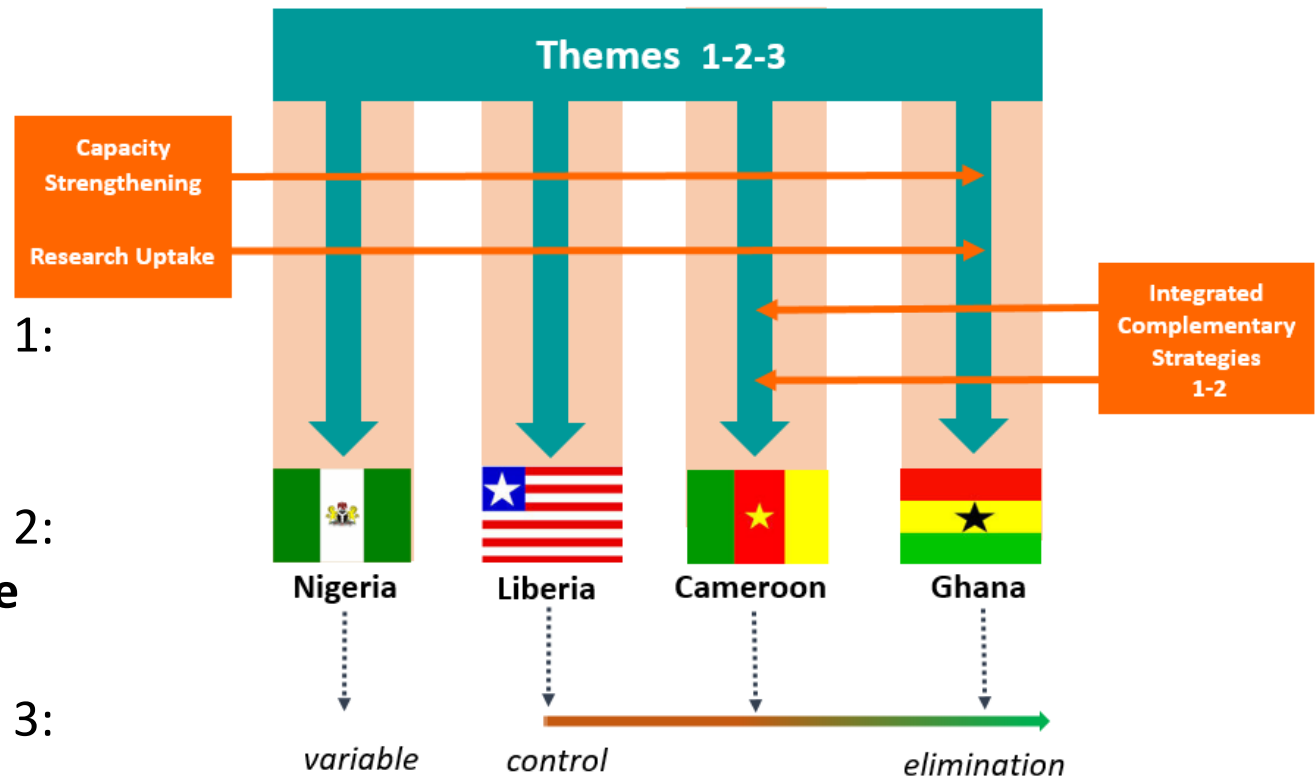
Mass Scale-up Theme 1:
Evidence Synthesis

Mass Scale-up Theme 2:
Applied Social Science

Mass Scale-up Theme 3:
Health Economics

Integrated Complementary Strategy Theme 1:
Macrofilaricides & Vector Control

Integrated Complementary Strategy 2: ‘*access / equity*’ of SCH interventions
Schistosomiasis/STH & Diagnostics (noting historical roots of the problem)



Peripatetic nature of tropical medicine studies

SPECIAL ISSUE REVIEW *Parasitology*

A centenary of Robert T. Leiper's lasting legacy on schistosomiasis and a COUNTDOWN on control of neglected tropical diseases

J. RUSSELL STOTHARD^{1*}, NARCIS B. KABATEREINE², JOHN ARCHER¹,
HAJRI AL-SHEHRI¹, LOUIS ALBERT TCHUEM-TCHUENTÉ³,
MARGARET GYAPONG⁴ and AMAYA L. BUSTINDUY⁵

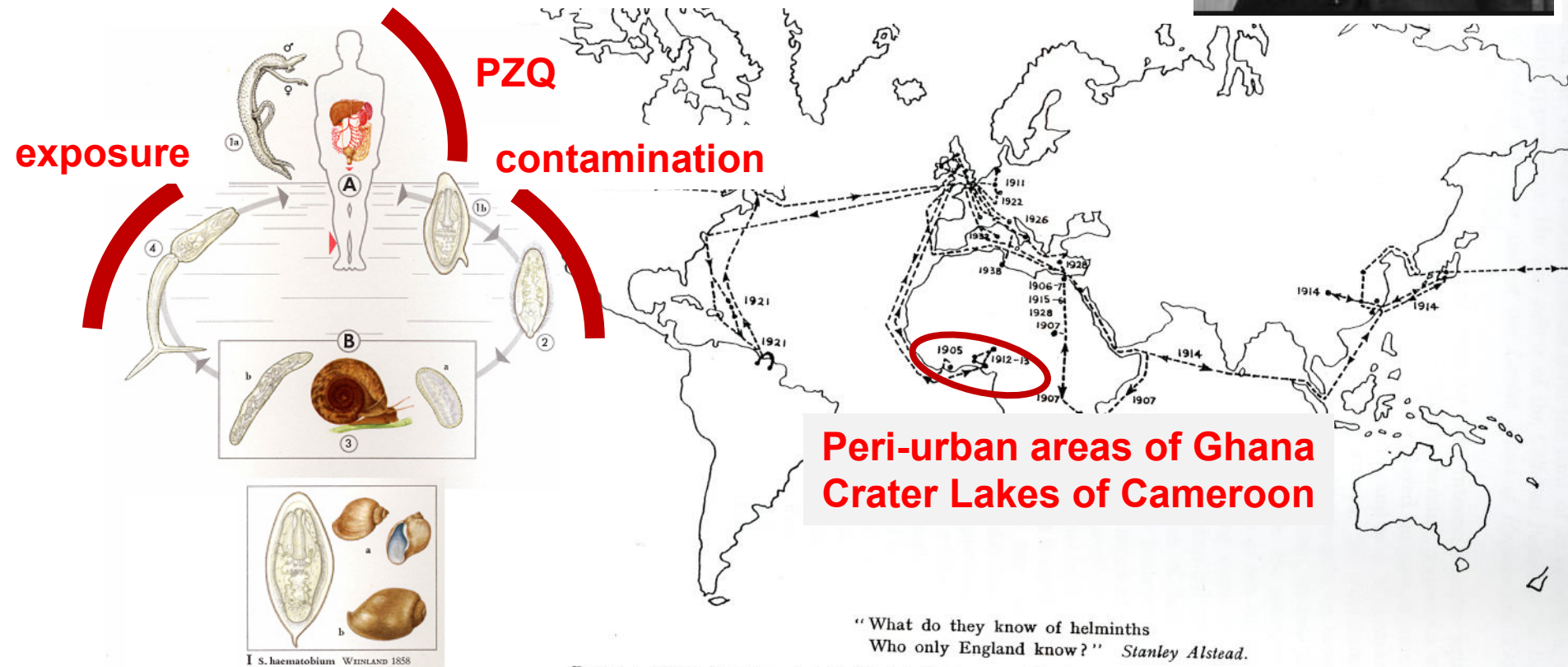
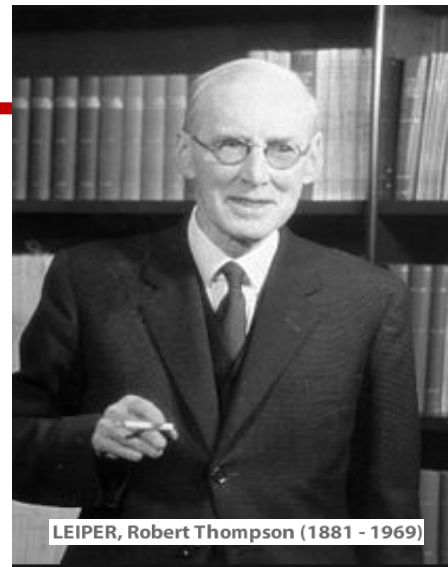
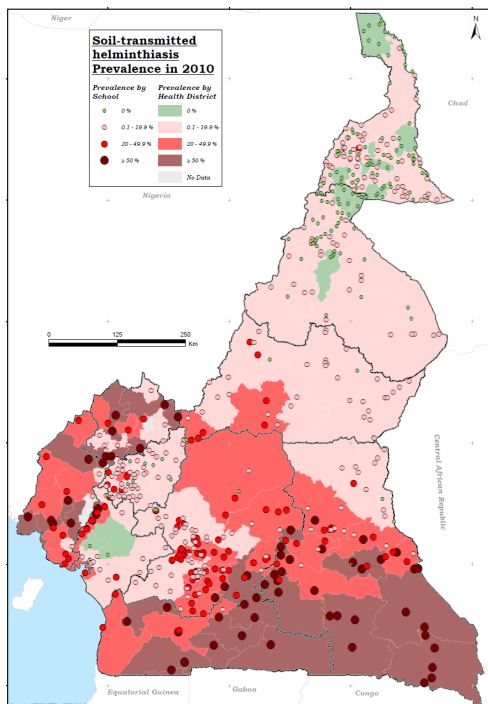
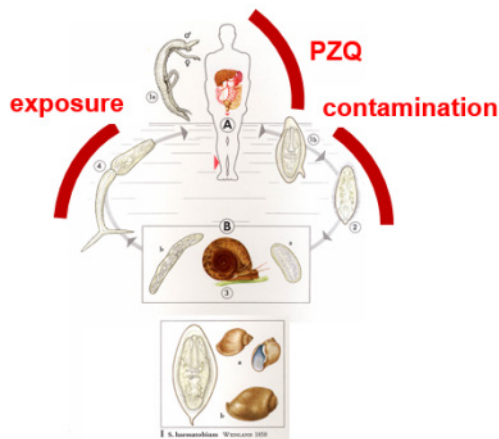


FIGURE 1. (From Supplement to *J. Helminth.* In honour of R. T. Leiper on the occasion of his 80th birthday, 1961.)

How we should be thinking of WASH and indicators



RESEARCH ARTICLE

Open Access



Urogenital schistosomiasis and soil-transmitted helminthiasis (STH) in Cameroon: An epidemiological update at Barombi Mbo and Barombi Kotto crater lakes assessing prospects for intensified control interventions

Suzy J. Campbell¹, J. Russell Stothard^{1*}, Faye O'Halloran¹, Deborah Sankey¹, Timothy Durant¹, Dieudonné Eloundou Ombede², Gwladys Djomkam Chuinteu², Bonnie L. Webster^{3,6}, Lucas Cunningham¹, E. James LaCourse¹ and Louis-Albert Tchuem-Tchuente^{2,4,5}

SCOPING REVIEW

Open Access



Towards interruption of schistosomiasis transmission in sub-Saharan Africa: developing an appropriate environmental surveillance framework to guide and to support 'end game' interventions

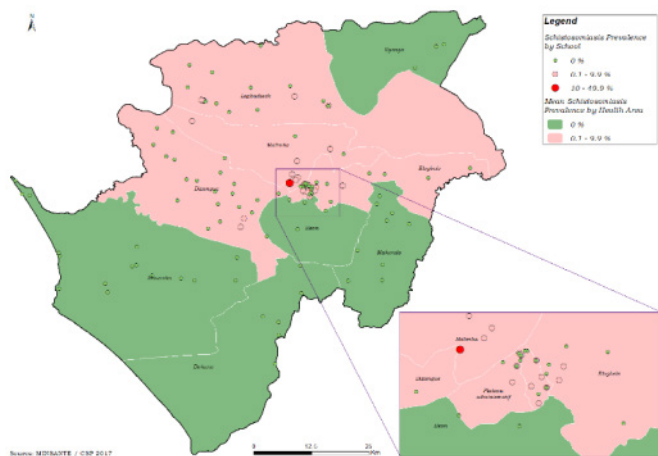
J. Russell Stothard^{1*}, Suzy J. Campbell¹, Mike Y. Osei-Atweneboana², Timothy Durant¹, Michelle C. Stanton¹, Nana-Kwadwo Biritwum³, David Rollinson⁴, Dieudonné R. Eloundou Ombede^{5,6} and Louis-Albert Tchuem-Tchuente^{5,6,7}

Intensification of multisector actions for better impact

1) Precision mapping to better tailor treatment

2) Mapping snail distribution for control

3) Pinpointing key water contact sites



Fresh impetus for snail control... new epidemiological theory here too



L.A. Tchuem Tchuente
@TchuemTchuente

Good to see a renew momentum for malacology & snail control to boost Schisto control/elimination in Africa. #ESPEN @elimin8schisto @WHOAFRO

À l'origine en anglais



L.A. Tchuem Tchuente
@TchuemTchuente

The 2nd China-Africa meeting 24-28/10/2016 was a further great step forward in strengthening coop for Schisto elimination in Africa @WHOAFRO

À l'origine en anglais



CHINA AND AFRICA JOIN FORCES IN FIGHT TO ELIMINATE SCHISTOSOMIASIS

August 29, 2017

by Prof Louis-Albert Tchuem Tchuente, Pamela Bongkiyung, Prof Russell Stothard

In the fight against Neglected Tropical Diseases (NTDs), it has become obvious that

Research uptake: targeted activities playing into policy action...

SCOPING REVIEW

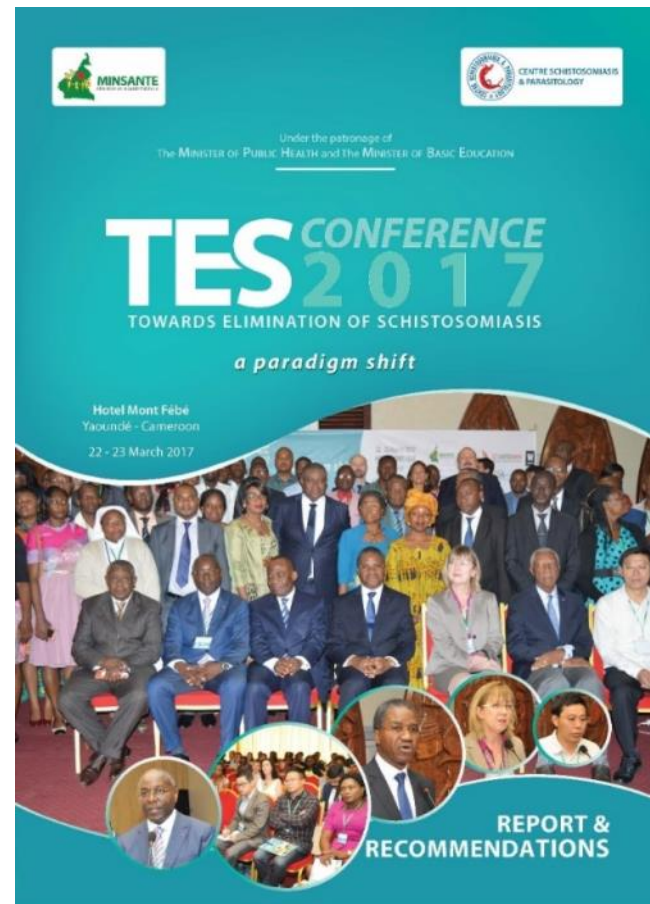
Open Access

Moving from control to elimination of schistosomiasis in sub-Saharan Africa: time to change and adapt strategies

Louis-Albert Tchuem Tchuente^{1,2*}, David Rollinson³, J. Russell Stothard⁴ and David Molyneux⁴



- Drivers of national policy change
 - advocate for increased PZQ supplies
 - accelerate towards public health goals
 - widen health system engagement (**NB academia**)
- Indicators of environmental transmission
 - WASH factors, e-DNA tracers of NTDs
 - PZQ MDA + biannual / expanded access



Summary from TES meeting

1

To expand general access to praziquantel treatment supplemental to current school based preventive chemotherapy campaigns by extending to pre-school-aged children & adults and increasing the availability of medicines in health centres and treatment stations throughout the year.

This is to ensure that all those who seek treatment can receive it. Specific mention is made to management of female genital schistosomiasis, encouraging gender equity.

2

To complete precision mapping to provide high resolution information, at the local level (i.e. by individual school), to better focus and tailor preventive chemotherapy. This is to all demographic groups (pre-school aged children, school-aged children and adults) and to ensure a minimum of annual treatment. With treatment as integral to the health system.

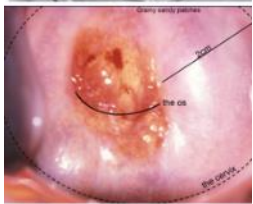
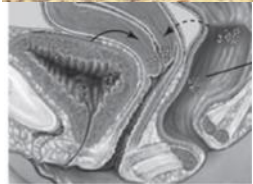
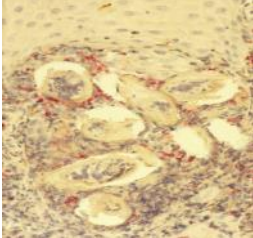
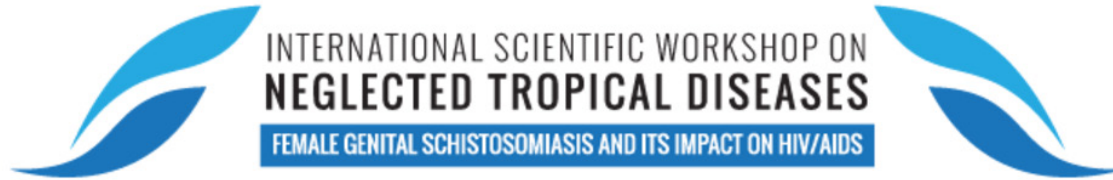
**FGS hits a blind-spot:
reveals many weaknesses
in the health system at all levels**

4

To encourage community ownership of the programme with appropriate communication and health education tools that nurture a closer partnership between local and national stakeholders engaged in cross-sectoral actions disease (Ministries of Education, Water & Energy, Agriculture, etc.).

COUNTDOWN implementation research

Connecting HIV/HPV/sub-fertility (www.fgsworkshop.org)



Systematic review: FGS widespread but under-reported



Invited Review

Female genital schistosomiasis (FGS): from case reports to a call for concerted action against this neglected gynaecological disease

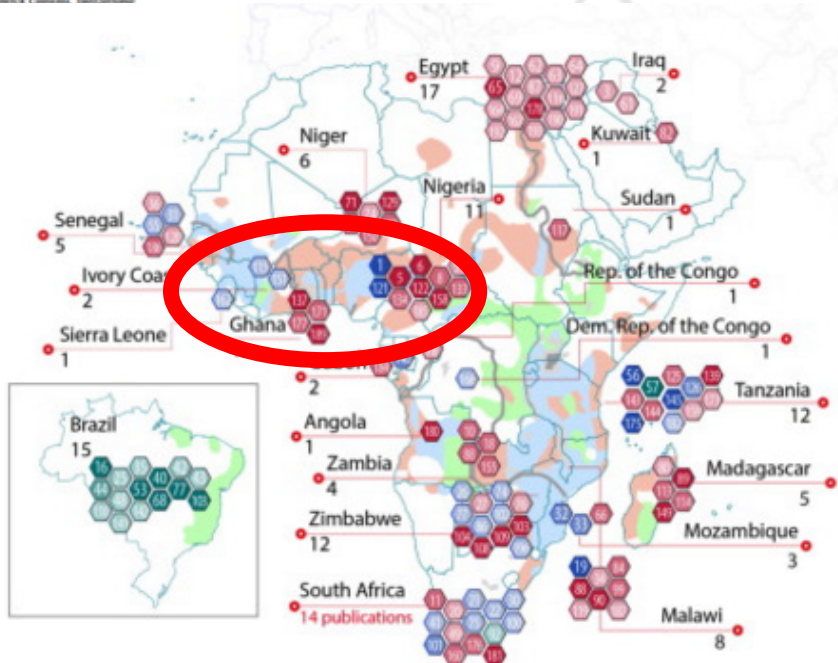
Vanessa Christinet^a, Janis K. Lazdins-Helds^b, J. Russell Stothard^c, Jutta Reinhard-Rupp^{d,*}

^aCentre International de Recherches, d'Enseignement et de Soins en Milieu Tropical (CIREST), Akoumou, Cameroon

^bGeneva, Switzerland

^cDepartment of Parasitology, Liverpool School of Tropical Medicine, Liverpool L3 5QA, UK

^dMünich, Germany, Switzerland



CALLING TIME ON UROGENITAL SCHISTOSOMIASIS

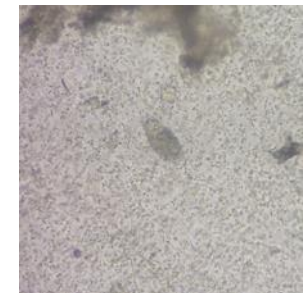
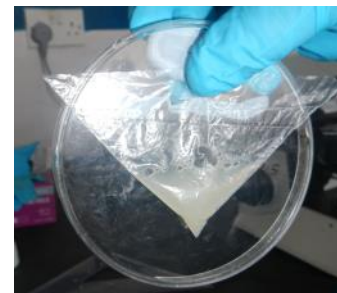
January 19, 2015

[Leave a comment](#)

Sally Theobald, COUNTDOWN Consortium & *Research in Gender and Ethics: Building stronger health systems (RinGs)*

I spent many of my teenage years living in Malawi, enjoying swimming in beautiful Lake Malawi. Wind on to age 30, and I was struggling to get pregnant. Eventually, following illness, I was diagnosed with schistosomiasis by a consultant and colleague at the Liverpool School of Tropical Medicine. I was told that I had probably been infected for a while and that it might be affecting my fertility. So I took praziquantel, the only available drug against the parasite, and soon after I was pregnant. Today my first born daughter is 10 years old. Whilst the links between urogenital schistosomiasis, sub-fertility and HIV have become increasingly well-established over my first born daughter's life time, a combined and robust health systems action that brings together neglected tropical disease, sexual and reproductive health and HIV communities to address and scale up treatment for urogenital schistosomiasis is sadly lacking.

Also MGS in Malawi



COUNTDOWN implementation research

In Ghana

1. Gendered experiences of living in affected communities have often been ignored in policies and interventions for schistosomiasis
2. Health workers lacked the capacity to effectively diagnosis and treat female genital schistosomiasis (*lack of awareness*)
3. Qualitative studies have given voice to women and explored their broader environment to assess ways to reduce transmission (*revealed stigma*)
4. New strategies and interventions are needed that reflect women and girls lived experiences with this disease (*encourage cross-sector dialogue*)
5. Key intervention areas include:
 - bespoke training and educational interventions
 - gender sensitive WASH interventions
 - integration into gynaecological screening (*HPV/cancers*)

COUNTDOWN implementation research

Female genital schistosomiasis (FGS) in Ogun State, Nigeria: A pilot survey on genital symptoms and clinical findings

U.F. Ekpo¹, M. Odeyemi¹, S.O. Sam-Wobo¹, O.B. Onunkwor¹, H.O. Mogaji^{1,2}, A.S. Oluwole¹, H.O. Abdussalam³ and J.R. Stothard⁴

SUMMARY

The Nigerian national control programme (NCP) for schistosomiasis does not have a specific component for female genital schistosomiasis (FGS), mainly due to gaps in epidemiological and clinical data. A pilot investigation for FGS in girls (>5 and <15 years) was conducted in Abeokuta, Ogun State, Nigeria. The results of the investigation are presented here.

In Nigeria (like elsewhere)
a lot of women likely have FGS but sadly don't know it

- a very cryptic health burden
- better diagnostics needed (rtPCR)
- a PC disease needing an IDM approach

- a very cryptic health burden
- better diagnostics needed (rtPCR)
- ... needing an IDM app

- a very cryptic
- better diagnostics needed (IHC, etc.)
- a PC disease needing an IDM approach



disch

trace of blood

1

2

3

4

5

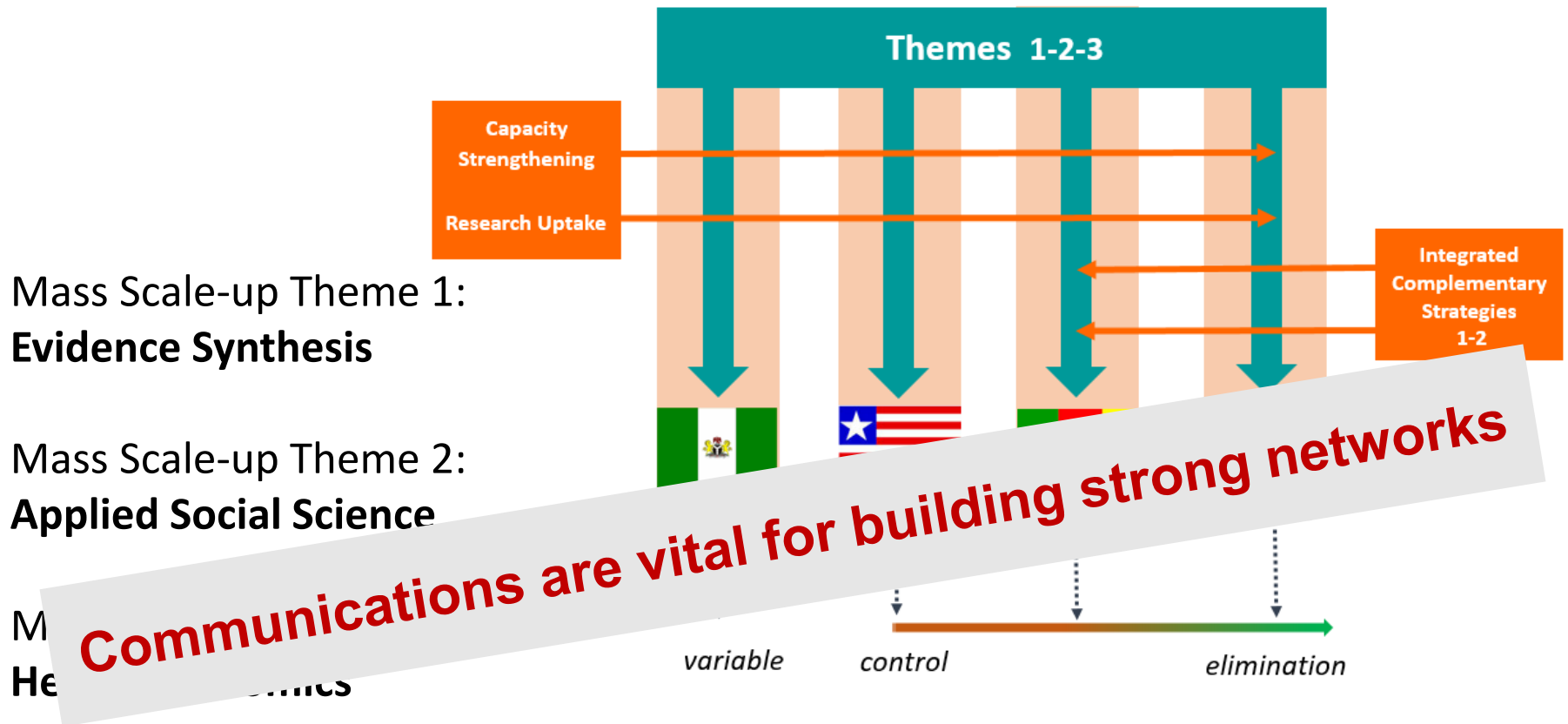
6

Sandy patches on homogenous yellow area	6 (30.0)
Grainy sandy patches	10 (50.0)
Nabothian cysts	1 (5.0)
Cervical polyps only	1 (5.0)
Rubbery papules	1 (5.0) ^a
Abnormal blood vessels	3 (15.0)
Suspected cancerous growth	1 (5.0)

Fig. 1. Standardize symptomologies a vaginal discharge colour chart (Hegertun *et al.* 2013).

^a This is the first time this condition has been reported outside of Madagascar (Randrianasolo *et al.* 2015).

COUNTDOWN activities set across **five** major themes



Integrated Complementary Strategy Theme 1:
Macrofilaricides & Vector Control

Integrated Complementary Strategy 2:
Schistosomiasis/STH & Diagnostics



At the very least you need a solid e-footprint to be visible



www.countdownonntds.wordpress.com

www.countdownonntds.org

@NTDCOUNTDOWN

Encourage networking and fresh interest across topics

2017 British Society for Parasitology Autumn Symposium
Thursday, 28th September at the Linnean Society, Burlington House, London

**The multidisciplinary of parasitology:
host-parasite evolution and control in an ever changing world**

Organisers: Prof. R. Stothard (LSTM) & Dr B. Webster (NHM)

Session A	Chair: Prof. R. Stothard	Theme - <i>an ever changing world</i>
10.30 am -	Welcome Prof. Sir R. Anderson	Progress in the control of human helminth infections by mass drug administration
11.05 -	IFTM Medal (see http://www.iftm-hp.org/)	Award of International Federation for Tropical Medicine (IFTM) Medal to Prof. D Rollinson, citation read by Dr Southgate and IFTM President Prof. Mas-Coma.
11.15 -	Prof. S. Mas-Coma	Human fascioliasis spread: impact of crucial mankind's history events
11.35 -	Prof. L. Tchuem-Tchuente	From basic parasitology to applied public health: challenges for the control of helminthiasis in Cameroon
11.55 -	Prof. D. Molyneux	Addressing Neglected Parasitic Diseases: moving towards the development agenda amidst change-partnerships, networks and global health policies
12.15 -	Panel discussion & poster speed talks (even numbers)	
12.45 pm	Buffet lunch in the Linnean Library with poster viewing	
Session B	Chair: Prof. D Molyneux	Theme - <i>the multidisciplinary of parasitology</i>
1.45 pm -	Prof. R. Gasser	Harnessing genomic and bioinformatic tools to explore socioeconomically important parasites
2.15 -	Prof. J. Utzinger	Schistosomiasis, snails and prawns: the interplay of parasitology and ecology
2.35 -	Dr B. Webster	New molecular tools to provide insights into schistosome diversity in Africa and beyond
2.55 -	Prof. T. Anderson	The genetic basis of transmission-related traits in schistosomes
3.15 -	Panel discussion & poster speed talks (odd numbers)	
3.40 pm	Afternoon tea in the Linnean Library	
Session C	Chair: Dr D. Rollinson	Theme - <i>host-parasite evolution and control</i>
4.10 pm -	Prof. J. Webster	A OneHealth approach to schistosomiasis control in our changing world
4.40 -	Dr L. Reimer	The evolving needs of vector-borne disease surveillance across the world
5.00 -	Prof. J. Vercruyse	Control of helminth ruminant infections by 2030
5.20 -	Dr T. Littlewood	Palaeontology meets parasitology: the changing perspective of fossil parasites to parasite futures
5.40 -	Panel discussion	
5.55 pm	Closing remarks Prof. M. Taylor (BSP President) Evening drinks in the Linnean Library sponsored by the LCNTD with poster viewing	

7.30 -11.30 pm Symposium dinner with live music (by ticket) at the Kings Head, Mayfair, W1S 4RX

The BSP AS is in conjunction with the Linnean Society with generous support from RSTM&H, LCNTD & LSTM

- 2018 special issue in Parasitology



2014 “*Advances in diagnostics for parasitic diseases*”

- 2017 various blog outlets



2016
“*Scottish encounter with parasitic diseases*”

Conclusions (in three Cs)

Seminars



Seminar Organisers

EPH: Konstantina Boutsika
MPI: Till Voss

- Upcoming Seminars
- University of Basel Events

Swiss TPH organises regular Seminar series on Advances in Infection Biology, Epidemiology and Global Public Health. All interested people are welcome.

Symposia



Connecting WASH with Neglected cross-sector imperative



The COUNTDOWN Programme has partnered with the Institute of Development Sanitation and Hygiene's interactive role for a sustainable solution towards neglected diseases. COUNTDOWN convened a meeting on 27th July 2017, with our partners at the InsIDe discussion with expert parasitologists, nutritionists, policy researchers and social scientists. Discussions also considered the gender angle such as women, men, their reality of living with or caring for those with NTDs.

The outcome of the discussions was the brief titled: "Connecting WASH with NTDs: recommendations:

- Promote intersectoral working
- Embed NTD action in local realities
- Recognise women's labour as finite
- Develop strong, robust information systems and
- Retain flexibility in policies and interventions.

Communicate (*whatever language*)

Cross-talk (*break down silos*)

Collaborate (*teams reach targets*)



CouNTDown Cameroon @CountdownNTDCam · 19 h

The challenges bad roads pose in the fight against [#neglectedtropicaldiseases](#) especially during the rainy season can not be stressed enough.

🌐 À l'origine en anglais



Acknowledgements

Thank you

Swiss TPH



Supporting the
COUNTDOWN
consortium



Key **COUNTDOWN** ICST-2 UK staff

Suzanne Campbell (LSTM)

Lucas Cunningham

Faye O'Halloran

Deborah Sankey

Tim Durant

Grace Macklin

Lisa O'Halloran

Zikmund Bartoníček

James LaCourse

Martyn Stewart

Emily Adams

NHM David Rollinson Bonnie Webster

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