

STSM Report: Short Term Scientific Mission in Switzerland 3-9 April 2016 on Transdisciplinarity in One Health

REFERENCE: Short Term Scientific Mission, COST TD1404 NEOH

Beneficiary

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Host

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Period: from 3rd April -9th April 2016

Reference code: COST-STSM-TD1404-33271

1. Purpose of the visit

The aim of the short-term scientific mission (STSM) at the Universities of Zurich and Basel was to advance the writing of the NEOH handbook, in particular on the theoretical framework of 'One Health' within working group 1. More specifically, the aim was to work on the development of the theoretical framework and the methodologies to operationalize leadership, team working, and transdisciplinarity that would help discussions in meetings of WG1 and 2. The Universities of Zurich and Basel have both been involved in transdisciplinary research in various fields, including 'One Health', Animal Health, Education as well as in Tropical and Public Health. Therefore, it was very important to use this STSM to gain a clear understanding of the above-mentioned concepts, which are at the core of the NEOH theoretical framework. I am a member of working groups 1 and 2, and co-leading working group 3 of the COST Action TD1404 NEOH. I am also leading author of a commentary on One Health aimed for submission to the European Journal of Public Health.

2. Description of the work carried out

Prior to the STSM in Switzerland, I worked closely with Dr Simon Ruegg on the scientific article "How One Health can contribute to sustainability". The discussions that Dr Simon Ruegg and I had during the finalization of this article helped me to focus on the main areas for discussion and research during the STSM. In particular, the discussions with Dr Simon Ruegg, *Dr Christian Pohl (ETH Zürich USYS TdLab), Dr Esther Schelling (Swiss Tropical and Public Health Institute, Dept. of Epidemiology and Public Health,), and Prof. Dr. Chinwe Ifejika Speranza, Unit Leader Sustainable Land Management, University of Bern Institute of Geography) proved to be very helpful. During these discussions, we delved deep into aiming for clear definitions of disciplines, multidisciplinarity, interdisciplinarity and transdisciplinarity. Furthermore, we had discussions on effective teams, well-structured real teams vs. pseudo teams, tacit knowledge, cross-disciplinary collaboration, the historical aspect of transdisciplinarity, the functions of Transdisciplinarity-net (td-net) of the Swiss Academies of Arts and Sciences, transdisciplinarity as an important element of the Eco-health research approach, the structure of transdisciplinary teams, the climate of transdisciplinary teams that can support and deliver

innovation in 'One Health', unexpected outcomes of transdisciplinary research and evaluation of transdisciplinary research. We also had discussions on leadership of transdisciplinary teams and how this can be effective in bringing about the holistic, inclusive, respectful and tolerant ways of working, as well as achieving acceptable and manageable solutions to problems within a given context in 'One Health'. During the meetings, I was also given valuable information regarding salient literature on the above concepts, as well as tools for measurement and for evaluation of transdisciplinarity.

3. Description of the main results obtained

On the last day of the STSM, I discussed a plan with Dr Simon Ruegg for moving forward in defining and evaluating the 'One Health Operations' of the 'One Health' framework, in particular on the 'Working' part (Fig 1. from article stated earlier).

Defining the structure of 'One Health' Transdisciplinary Team: to differentiate Real Transdisciplinary Teams from Pseudo Transdisciplinary Teams

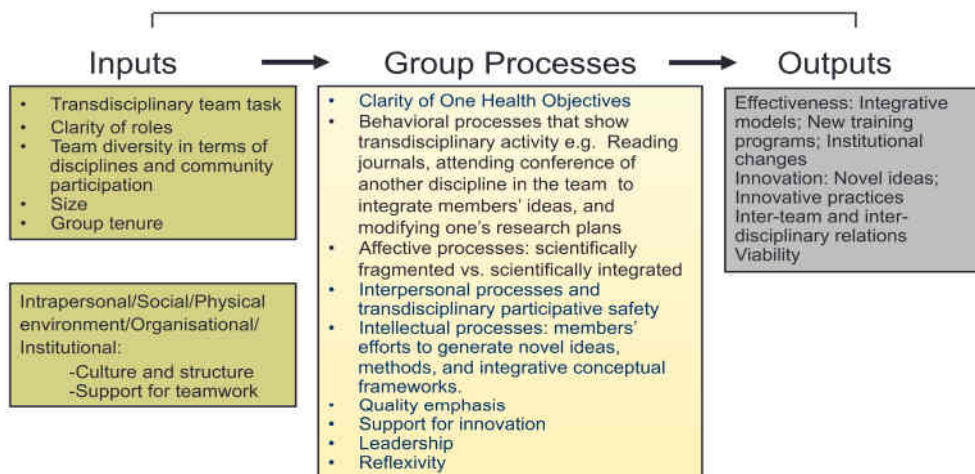
[Adapted from Stokols, D; Harvey, R; Gress, J; Fuqua, J; and Phillips, K., 2005 and Buttigieg, West and Dawson, 2011]. The main items can be:

- The number and specificity of disciplines represented by each participating agency in the team as required by the context-specific 'One Health' initiative
- The extent to which the participating disciplines' goals coincide with the vision and mission of the specific 'One Health' initiative (these are context-specific)
- The readiness of transdisciplinary team members to collaborate and to follow different pathways toward transdisciplinary integration as influenced by:
 - (i) The extent to which members had worked together on prior projects
 - (ii) The spatial proximity among researchers' offices,
 - (iii) The frequency of their face-to-face interaction
- Does the transdisciplinary team have clear overall objectives?
- Do the transdisciplinary team members have to work interdependently to achieve the objectives?
- Do the transdisciplinary team members meet regularly (face-to-face or virtually) to discuss the transdisciplinary team functioning and how it can be improved to achieve better 'One Health' outcomes for that specific initiative?

Developing a Transdisciplinary Team Climate model that supports Innovation in 'One Health'

The following model can provide the theoretical framework for evaluating TDT climate

Input-Process-Output Model of Transdisciplinary Collaborative Team Climate and effectiveness



This STSM should enable us to develop tools that could be used by WG2 in the evaluation of the case studies.

4. Future collaboration with host institution

My immediate task is to develop a questionnaire based on some of the tools that are already available and that were discussed during the various meetings. The scholars that I met in Switzerland brought to my attention several tools that have been used for evaluation of transdisciplinarity across contexts. This questionnaire is intended to be used by WG 2 during the assessment of the various case studies. The intention is to keep close contact and collaboration with the colleagues in Switzerland in the development of the transdisciplinary models. As regards NEOH, I am working closely with Dr Simon Ruegg on a number of potential publications and on the handbook.

5. Projected publications resulting or anticipated to result from the STSM

1. Commentary on 'One Health' for submission to EJPH
2. Progress in the various chapters in Handbook related to conceptualization, operationalization, measurement and evaluation of transdisciplinarity.

6. Confirmation by the host of the successful execution of the mission

Dr Sandra Buttigieg has carried out her STSM as planned. The discussions and references obtained from the various meetings have provided valuable material for an effective evaluation of transdisciplinarity in the frame of the NEOH handbook. The work has resulted in novel insights and will hopefully contribute some seminal publications in the field of One Health evaluation.

7. Financial summary

(Explanation/breakdown of how the living & travel expenses were spent, receipts are not required)

Expenses	Total expenses in EUR	% Covered by NEOH grant (EUR)
Travel Air	351.51EUR	85% (600 EUR)
Travel in Switzerland (Swiss travel pass)*	360 Euros	
Accommodation	750 EUR	85% (637.50 EUR)
Consumables (meals)	445 EUR	85% (378.25 EUR)
Total	1906.51 EUR	85% (1620 EUR)

*I needed to travel to Berne, Basel and in Zurich

Signatures

Grantee

Host

23rd April 2016