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WENNY W.S. HO

LIKE A BRIDGE OVER TROUBLED WATERS

Dialogues of policy, practitioner and academic knowledges

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Humanist Institute for Co-operation with Developing Countries (Hivos)
P.O. Box 85565 | 2508 CG The Hague | The Netherlands
www.hivos.net

IKM Emergent, European Association of Development Research and Training Institutes (EADI)
Kaiser Friederich Strasse 11 | 53113 Bonn | Germany
www.ikmemergent.net

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EXECUTIVE SUMMARY

This think piece deals with knowledge integration (KI) in international development cooperation (IDC), which is understood as processes of knowledge co-creation linking different knowledge domains, and in particular those domains of policy-making, science (academia) and development practice. The paper builds on the insights that emerged from a number of workshops co-organized by the author, Josine Stremmelaar (Hivos[1]) and Sarah Cummings (IKM Emergent[2]), but is mainly based on a literature review of different theoretical streams. Its aim is to tease out elements and principles that determine effective knowledge creation processes, with particular reference to the knowledge landscape in The Netherlands where it forms part of a wider initiative to infuse new energy and impulse into the field of knowledge management for development. A background of this initiative is offered in Chapter 1. After a brief presentation of the knowledge for development landscape in Chapter 2, Chapter 3 explores knowledge creation processes in the sectors of agriculture, health and science, technology and innovation (STI). Chapter 4 then moves to the future and sketches concepts and principles that can be used to create stepping stones for a future course of action.

In general, I argue IDC would benefit from a more rigorous analysis, a deeper understanding of how claims can be backed by empirical studies, and what are normative propositions with high morality but more limited validity. Development professionals need to strengthen their capacity to discern normative, value-led statements from substantive arguments derived from evidence. The capacity to discern is especially important in the development sector as a key role in its reflexivity is assigned to consultants.

In the Netherlands, many development organisations have expanded and intensified their knowledge activities. A number of reviews have been undertaken recently which point to common areas that need improvement. Nevertheless, it would be a strategic move for the Dutch development actors to join hands and embark on a collective process of identifying and articulating strategic and generalisable lessons. This would strengthen the conceptual and methodological evidence base from which ideas and lessons can be drawn and change in knowledge programmes can be leveraged to overcome weaknesses.

Important lessons can be learnt for knowledge co-creation and integration for development by analyzing how these processes are shaped in other sectors. The paper explores how knowledge and knowledge creation takes place in the sectors of agriculture, health, and science, technology and innovation (STI). Results are then compared with knowledge processes in the development cooperation sector. There is an apparent move across sectoral streams towards knowledge co-creation as multi-level, multi-actor and multi-method approaches to unstructured problems in which boundary work and boundary spanning figure centrally.

In both the agricultural and health sectors, a number of characteristics are identified that together seem to create a landscape conducive to knowledge integration and cross-sector fertilization. Further research is needed to draw more definite conclusions.

The agricultural sector can be characterized by a history of reinventing its approaches. For good or for bad, lessons from previous experience have led to new generations of programming in the sector. Some of these have led to exciting new initiatives. It is important to see these innovations in relation

[1] www.hivos.net
[2] www.ikmemergent.net

to the relatively closely-knit social tissue of the agricultural field, hypothesized to have led to an inbuilt 'reflexivity'. Four factors are held out that appear mainly to account for this:

1. Sustained efforts over a long period by a number of thinkers championing various ways of cross-boundary work and knowledge co-creation;
2. A history of being 'forced' to move towards 'new' ways of thinking about and undertaking (international) agricultural research and development;
3. Possible embedding of knowledge integration efforts in institutional settings where a 'natural' interaction takes place between the domains;
4. Periodic undertaking of meta-studies which contribute in articulating experiences.

One important lesson from the agricultural sector is that, despite the often unstructured character of a problem, there is a need to bring in 'tried and tested' rigorous processes, tools and expertise from areas where lessons do exist, e.g. in stakeholder engagement, facilitation and teambuilding. Another lesson is that, even though an emergent approach is applied, a deliberate sequencing can be followed of *piloting*, *articulating* to strengthen theoretical understandings followed by *furthering practice* to achieve double loop learning. Further nodes of articulation for double-loop learning are then created by undertaking meta-studies and developing meta-theories which support further theorizing. In this way, processes of learning are intertwined with the strengthening and expanding the existing theoretical and empirical base. This forms one foundation for the 'actionabilization' – or putting into practice - of new theoretical understandings. Further lessons show that investing in boundary actors, work and objects contributes greatly to successful knowledge co-creation processes. However, this needs to be accompanied by strategies to tackle, from the beginning, the often large (and largely hidden) asymmetries of power felt or used by stakeholders.

The integration of the lay and scientific forms of knowledge in a negotiated process is an useful insight that emerged in health literature. Perceiving knowledge integration in this way opens the space for developing specific methodologies.

'What is knowledge' and 'who has knowledge' are studied in the research field of STI studies. This field has generated insights and interesting propositions which could strengthen knowledge integration approaches in development cooperation. One proposition concerns the construction of validity of produced knowledge. Constructing validity not as rooted in an objective reality but in terms of plausibility and credibility, provides more robust criteria to assess knowledge for action in unstructured problems and situations. Plausibility and credibility therefore, offer important handles to judge and frame knowledge for IDC change processes. Unfortunately, such a view contrasts sharply with the current push for evidence-based knowledge production.

Another potentially useful concept that has emerged in STI is that of scale of governance for knowledge management. Other potentially enriching concepts and insights can be further explored. However, the high number of initiatives and concepts can blur understanding of what can be actually gained to strengthen knowledge for development and knowledge co-creation approaches in particular. An effective compass can be obtained by placing knowledge creation in a context of achieving change.

Knowledge creation processes in development cooperation can be enriched by more systematically consulting bodies of knowledge in widely divergent areas for new insights or innovative concepts, but this consultation should not be boundless. To avoid getting lost in an apples-versus-oranges

discussion, development actors need to come to a minimum shared understanding of the main factors that influence knowledge creation in IDC. One influencing factor is, for example, that development cooperation functions as a set of loosely, sometimes near-accidentally coupled systems, which straddle many different knowledge domains and ecologies. A common minimum conceptual basis and shared sense of direction will furthermore strengthen the social tissue of knowledge co-creation processes because trust and rapport between involved actors is deepened. In the end, this will enhance the effectiveness of interactions in knowledge co-creation processes.

The paper identifies several important influences on knowledge creation processes for development:

1. The entangled accountability chains in development cooperation complicate any investment in knowledge endeavours. Power dynamics that confuse basic questions such as 'Whose knowledge counts' also taint understanding and structuring of accountability chains in knowledge programmes;
2. Public scrutiny demands straightforward and short-term communication products which do not align with the dynamics of knowledge co-creation approaches;
3. Knowledge for development is set apart by the sometimes extremely dissimilar cultural, socio-economic and political backgrounds of actors involved, who furthermore differ widely in public visibility;
4. There is frequently a mismatch between available (financial and human) resources and the task at hand. As problem ownership is unrelated to, for example, funding flows, this creates continual frictions and disparities.

Proposals for the future

A number of proposals are put forward to bring a new dynamism in knowledge co-creation efforts. First of all, it is proposed that the sector needs to avoid further 'paralysis by analysis'. It needs to invest most in putting concepts into practice as this is where the most change will probably be seen. Examples of conceptual frameworks are provided that help putting concepts into practice, such as the distinction between complicated, complex and chaotic.

Much conceptual and methodological clarity regarding knowledge co-creation and knowledge integration already exists that can be built upon and further enriched with insights gained in the development sector. Across different sectors, a consensus on the contours of a framework is emerging, not necessarily of detailed steps to follow, but of the broad guiding principles. Rather than embarking on a new knowledge activity as if it were a journey to an unknown land, it is more fruitful to arrive at a collective understanding of the current state of the art and jointly define where and why development cooperation processes may diverge from what has been built so far in other sectors. Regularly organising these **reflexive benchmarking** and **purposeful scanning exercises** beyond 'the usual suspects and subjects' in development cooperation could accelerate the pace of innovation and deepen understanding in knowledge programmes.

Development actors need to follow a more robust and rigorous methodical approach to knowledge processes. To achieve that, they need to be able to **differentiate and systematize**: systematize under what circumstances knowledge integration approaches provide added value and why; and differentiate between the possible contribution of convergence and divergence, when diversity is enriching, and when a common stand or collectivization is required, and of what elements (e.g. values, approaches, resources).

To further build a theoretical and empirical body of knowledge co-creation for the development sector, knowledge produced by the sector needs to be **able to withstand the scrutiny** of stakeholders including scientists. This is a must in knowledge co-creation where credibility of the knowledge produced is a fundamental asset. Concepts cannot be simply adopted from other sectors, but require systematic and contextualised validation. In consequence, the proposed purposeful sampling strategies of useful concepts and approaches should be followed by conscious and methodical articulation of verifiable contributions and applicability. Thorough knowledge co-creation processes could be further enhanced by actors having the capacity to understand and judge the basis of claim-making.

Processes of creating knowledge about knowledge co-creation can be stimulated by intensifying multi-stakeholder interactions and joint sense-making. This requires systematically and continuously **strengthening the inbuilt reflexivity** of the development cooperation sector, enhancing its capacity to change itself based on acquired self-knowledge. In transactional organizing, the task at hand is the centre of organizing around which the key actors are identified and included. Their self-organising capacity includes the management of relationships and boundaries in order to explicitly take account of the development knowledge system rather than purely organisational interests. Such an approach could be helpful to move beyond de-politicized knowledge sharing, and strengthen platforms for collective interpretation and sense-making that supersede organisational interests.

As sense-making plays a fundamental role in knowledge generation processes, knowledge does not simply 'travel'. In consequence, processes of knowledge co-creation which hinge on collective sense-making, intense processes of interaction and interpretation are indispensable. This requires that those engaged in knowledge work in development cooperation have a well developed self-awareness or a deeper consciousness of the own theory of change; alternative paradigms; and conceptual and methodological principles, and their theoretical embedding.

Knowledge co-creation requires systematic boundary thinking and consistent organising and approaches such as transactional organizing, besides the strengthening of the institutional infrastructure. It is not clear the extent to which organisations have been undertaking efforts to consciously **strengthen systemic synergy**, **complementarity and connectivity** also at the conceptual and methodological level. An institutional analysis of the current landscape is therefore proposed. This would include the identification and strengthening of existing nodes of transcription and translation (boundary organisations or individuals), the building of new ones and enhancing their credibility. Actors that have thus been identified require more than the agility and flexibility to move between domains to grow into the job. They will evolve and mature guided by criteria of independence, authority, credibility, openness and humility, and be accountable to the different communities in the domains.

Given that working in development "for the poor", by definition implies working with differential power bases and relations, understanding knowledge co-creation processes as negotiation and politics requires an awareness of expected and unexpected effects, and where possible, a strategy to strengthen the power bases and capacities of those who most need that support. Literature on knowledge management and development cooperation is littered with wordings that implicitly express problematic issues related to 'North - South' relationships. Biases and power relations are an intrinsic part of knowledge co-creation processes which requires a constant awareness from the different

parties involved. Efforts are required to flag the manipulation of knowledge, and carefully craft more balanced boundary work and objects.

REPORT

1. The Terrain: Cross-domain knowledge integration

This think piece deals with knowledge integration (KI) with a focus on the international development cooperation (IDC) sector in the Netherlands. Knowledge and knowledge integration are concepts that are subject to long standing and unresolved heated debates. There are erudite scholars arguing for a range of perceptions in which a great diversity of issues is being emphasized. To avoid being drawn in an endless debate on what knowledge is and what it constitutes, a simple working definition of knowledge will be used in this paper. Hjorth (2003. In: Hordijk, M. and I. Baud, 2006) defines information as tangible data consisting of hard numbers and facts, independent from context and easily transferable. Context is needed to build knowledge from information. Sense-making and interpretation (collective or individual) are important to transform one into the other. Knowledge therefore has an inherent dimension of continuous action: human beings continuously interpret and make sense of what happens around them. Knowledge therefore can seldom be easily disseminated, *travel* or be reproduced, "because it is filtered according to the perspectives of individuals or organisations reflecting their context and internal understanding" (Hjorth, 2003. In: Hordijk, M. and I. Baud, 2006: 669). *Knowledge* can thus be defined as *contextualized and interpreted information*.

Knowledge management is then defined as: *encompassing any processes and practices concerned with the creation, acquisition, capture, sharing and use of knowledge, skills and expertise (Quintas et al., 1996) whether these are explicitly labelled as 'KM' or not* (Swan et al., 1999. In: Ferguson et al., 2008: 8).

Koenig (2005) distinguishes four generations of knowledge management with the fourth characterized by the importance of extra-organisational sources, the centrality of situated, contextual knowledge and the existence of inter-organisational communities of practice. Snowden (2002) describes three ages of knowledge management with the third age based on understanding and distinguishing complicated, complex and chaotic knowledge systems. The nature of the complex domain is said to be the management of patterns and the identification of early signs of patterns forming allows for interventions to disrupt those that are considered undesirable and support or stabilize those wanted.

Hivos has applied a methodology called *knowledge integration*. By integrating various forms of (new) knowledge - academic, practitioner, educational and cultural expressions of knowledge - new insights can be created and strategies formulated that contribute to the development of new policies and practices for the development sector. In *knowledge co-creation* as a type of knowledge production, *different groups*, such as non-governmental organisations (NGOs), governmental bodies, civic groups, businesses and knowledge institutions including think tanks and universities, *come together in a strong interactive process of knowledge production intimately linked with problem solving*. An environment is created in which actors create mutual relations and meaning with the emphasis on creating the conditions to structure problems and facilitate the search for solutions rather than developing a clear action plan (Regeer and Bunders, 2009: 15). For the purpose of this paper, cross-domain knowledge integration is understood as processes of knowledge co-creation linking domains particularly those of policy-making, science (academia) and practitioners. The way in which

knowledge co-creation and cross-domain knowledge integration are understood here, places these concepts within Koenig's the fourth generation and Snowden's third age of knowledge management.

Background of the think piece

The paper is derived from understandings developed from a number of earlier workshops.[3] It builds on pointers that emerged, but is mainly based on a literature review of different theoretical streams. From these elements, the following guiding questions were formulated:

1. Can more information be obtained on aspects that have been left uncovered in the mentioned knowledge workshops and events?
2. What elements/factors can be identified as interesting/effective to make KI work? Are there commonalities across sectors/initiatives/boundary domains?
3. Can information/evidence be obtained regarding what made change happen and why/how in which domain?
4. What are useful supporting concepts (and practices) that have emerged from outside the IDC in terms of practices and theories?

The focus of this paper is to tease out elements and principles that determine effective knowledge co-creation processes. It is meant to provide provocative thoughts to reinvigorate thinking in the Dutch development cooperation sector, and should not be read as representing the bulk of existing efforts. Also, while the aim of the paper is to contribute to thinking and practices in The Netherlands, the literature review has not been limited by geographical boundaries. The assumption underlying the paper is that development is a knowledge intensive process, and this assumption is applicable to the development sector in general. In consequence, rather than contesting it, this paper departs from the need to create or use knowledge for development.

Although without doubt, managerial and organisational aspects should be part and parcel of any knowledge initiative, this paper does not focus on management implications that would be needed for organisations to become more effective in their implementation of approaches to knowledge. Furthermore, even though multi-stakeholder processes are mentioned frequently, details about who should be involved falls outside the paper's scope.

Across the IDC sector, knowledge is increasingly being acknowledged as a key resource to achieve effectiveness. In recent years, many NGOs in the Netherlands and beyond have developed knowledge-related programmes, and in some cases, established or further expanded organisational units specialized in knowledge sharing and learning. Many initiatives have been undertaken in recent years but it is not clear whether they amount to a real change of the Dutch knowledge landscape.

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[3] The workshops referred to are:

1. Innovating civil society: How do researchers add value to practice? Workshop at the Ceres Summer School, 10th June 2008
2. Connecting ivory towers: triangulation of knowledge from practice, research and policy-making. Workshop at the Ceres Summer School, 3 July 2009
3. From Brussels with love: cross-domain cooperation in development. Workshop at KM4Dev 2009.
4. Like a bridge over troubled water: dialogues of policy, practitioner and academic knowledges. Workshop at the Ceres Summer School, June 2010

One of the impediments to development approaches in the Netherlands is commonly felt to be the fact that the different knowledge domains of researchers, practitioners and policy-makers are not working together to create new knowledge for development. This has been a constant in the series of workshops held since 2008, and is also pointed out in the literature, e.g. by Hellsten and Cummings (2010). Knowledge development and the management and sharing of knowledge across domains within the sector is seen to be hampered by a number of factors (Ho, Stremmelaar and Cummings, 2009):

- The domains of policy, research and practice have the tendency to work in isolation focusing on their own domain-related interests;
- While Southern interests and demands should ultimately be the basis for and guiding initiatives to create and articulate knowledge in development, this is too rarely the case;
- Learning as a sector-wide knowledge system takes place only on an *ad hoc* basis.

Whether and how the different domains interact as aspired or claimed will be further explored in the next section.

2. Knowledge in development cooperation

2.1 Changing roles and ways of functioning

Trends and changes in the IDC sector are to be understood in the wider societal context where each and everyone of the actors involved in the knowledge landscape is on the move and looking how to re-create itself, venture into new alliances, and try out different roles and functions.

With regard to policy-makers in ministries and other governmental bodies, there is a noticeable trend to move towards system innovation (see for example, Faber A. and R. Kemp, 2005; and, Termeer J. and R. Kranendonk, 2008) in which there is less attention for steering, planning and control by policy makers in favour of more interactive and inter-organisational arrangements, such a public-private partnerships, to enhance learning and innovation. Although these initiatives are certainly not yet widespread, interest and support is growing at high levels within governmental circles with the establishment of task forces, knowledge managers and specialised units.

Although the stereotyped researcher in his or her 'ivory tower' still exists, here too shifts are visible. An example of where academics are becoming involved in new alliances is the recent workshop organized by the University of the Western Cape from South Africa, the Ghent University, Belgium (UGent) and the Centre for Development Innovation of Wageningen University, Nuffic (the Netherlands) and VLIR-UOS (Belgium) on "The knowledge triangle in developing countries: a missed opportunity in university development cooperation?" The Institute of Development Studies (IDS) at the University of Sussex, UK, has recently adopted knowledge co-creation involving multiple actors as part of its organisational vision.

With regard to citizens and civil society, here too changes are noticeable, although the trends are not unidirectional. Access to and use of multiple channels, actors and media by citizens and their organisations has escalated, 'common' people feel less inhibited to question professional or scientific authorities or demand to be heard. At the same time, the distinction between evidence and

opinion has blurred, while people's wisdom and experiential basis, built up and tested over long years, may become obsolete in a short period.

There are signs of shifting roles and functioning with regard to the for-profit sector, of businesses moving into areas traditionally covered by development organisations, discovering the *bottom of the pyramid* (see for example: Prahalad, 2010), or receiving subsidies to undertake economic and social development activities. Some have set up their own funds for development or charities that compete for grants with traditional NGOs. At the same time, infrastructure and the nature of knowledge activities has changed rapidly over the past decades. The insulated company laboratory is no longer the standard. Companies have greatly diversified their approaches to knowledge creation and use. They experiment, among others, with open source approaches by throwing out open invitations to contribute knowledge to areas of interest, by entering in unusual partnerships, and funding governmental and academic knowledge institutions, and by establishing or co-financing science parks, creating their own scientific journals, awards and platforms for interaction and exchange. This implies that also in for-profit sector, multi-level, multi-actor engagements for knowledge creation has increased.

All these changes and movements influence the space and boundaries for development actors such as NGOs, who are positioned between and connect these actors (Fowler, 2000). As they straddle the different domains and engage in a range of relationships, they have to deal with multiple simultaneous changes.

2.2 A changing context

In short, actors have moved away from traditional roles and ways of functioning, including ways of dealing with learning and knowledge. These shifts are partially driven by the increasing complexity of current day societal challenges, requiring new approaches to solution-finding. It is being increasingly recognized that with complex, unstructured social problems, often encountered in IDC, nobody can be aware of all aspects. An unstructured problem cannot be defined unambiguously: the nature of the problem depends on who looks at it. In consequence, working with multi-stakeholder setups and thinking in multiple perspectives is a growing trend. At the same time, it is acknowledged that many organisations lack the necessary competences and institutional conditions to handle unstructured social issues. Moreover, not only scientific knowledge is relevant for their resolution, but also social or experiential or other knowledges. This all results in an increasing openness to collaborative efforts focused on knowledge and knowledge creation.

Regeer and Bunders (2009: 21) state that in recent years a different kind of knowledge development has been called for in which "perspectives of different actors are integrated in the identification, formulation and resolution of problems". Several changes are currently emerging regarding knowledge production:

- Knowledge production is increasingly taking place in non-traditional knowledge institutions, such as consultancy firms, think tanks and NGOs;
- The knowledge monopoly of science is eroding due to public scientific controversies and sometimes visibly negative effects of science and technology;
- Partly in reaction to the erosion of trust in scientific knowledge, citizens and civic organisations increasingly look for or build counter-expertise.

Regeer and Bunders then distinguish between mode 0, 1 and mode 2 production of knowledge with a process of co-production and joint solution to structure and manage complex change processes forming the core in mode 2. Mono-, multi- and interdisciplinary scientific knowledge are here combined with experiential knowledge to share, construe and test new knowledge. In this way, socially robust knowledge is produced which is also scientifically reliable.

In 't Veld (2009b: 6) stresses the importance of reflexivity and reflexive mechanisms, defined "as events and arrangements that bring about a redefinition of the action perspectives, the focal strategies of the groups and people involved, as a consequence of mindful or thoughtful considerations concerning the frames, identities, underlying structures of themselves as well as other relevant stakeholders". This, in his view, relates to a crucial misunderstanding about the nature of knowledge in social systems. Contrary to natural or physical systems, social systems are capable of changing themselves based on acquired self-knowledge. He calls this process reflexivity and it distinguishes knowledge creation in social systems from simple cumulative processes in natural systems. In 't Veld expresses pessimism regarding the Dutch knowledge landscape in general. The dismantling of independent advisory bodies in the public domain and the (partial) subjection of remaining advisory bodies to market logic will result in a reduction of boundary functions, declining spaces and a reduced capacity of the society to reflect, reconsider, and to be mindful. This will result in a declining reflexivity of the society in general. The IDC knowledge landscape may not escape this general trend as here too, the closure of public think tanks and advisory bodies is taking place.

2.3 The knowledge landscape of Dutch development cooperation

Brown et al. (2006) state that while in the late 1990s and early 2000s attention was paid to building knowledge infrastructure, it seems that the current period is one of reflection and analysis as the field evolves. A number of topics seem to be catching the headlines: namely whose knowledge counts; the relationship between knowledge management and social change or even knowledge management and better practice including policy making; and the roles and relationships of different actors in knowledge production.

The Development Policy Review Network (DPRN), a transdisciplinary networking initiative to foster cooperation between different actors, has initiated a debate about the future knowledge agenda and infrastructure needed for IDC within its stream of activities entitled 'Structure follows Strategy'. It published an issue paper on the knowledge available for the future development agenda and the appropriateness of the research infrastructure (De Vries and Ros, 2010). The paper includes interviews with a number of prominent Dutch academics in development studies and related disciplines, giving their reaction to the recent report of the Scientific Council for Government Policy on the future of development policy (Lieshout et al., 2010). One relevant recommendation of the DPRN report is that the knowledge landscape must become better integrated with more attention to transdisciplinary work (De Vries and Ros, 2010). This implicitly underlines the fragmented nature of the knowledge landscape.

In the past years, the Dutch Ministry of Foreign Affairs has embarked on a number of initiatives, formal and informal platforms and learning activities. These initiatives have been encouraged and supported by the creation of internal high level knowledge management positions. The Ministry has

financed and sometimes even established itself, a number of transdisciplinary initiatives. These include: the IS-academy, designed to make research contribute more to policy formulation and development practice; the DPRN, which has closed shop in 2011 after six years of trial and error operation; and *The Broker*, a journal offering to "connect worlds of knowledge" by encouraging "exchanges between knowledge producers and development professionals". Under the former Minister of Development Cooperation, Bert Koenders (2007-2010), ministerial relationships were established or strengthened with the academic world, the business sector and with other ministries. It has to be observed that the knowledge instruments and channels set up and financed by the Ministry aimed mostly at strengthening its own learning capacity and enhancing interaction between policy-makers and science to boost the evidence-base of policy making. Its approach to practitioner and experiential knowledge has been less straightforward. It is not yet clear how the new leadership at the Ministry of Foreign Affairs will approach knowledge or deal with the initiatives set up by their predecessors.

With regard to Dutch development organisations, many have expanded and intensified their knowledge activities in recent years. There is a great diversity in focus and approach. Some prioritized strengthening synergy between their partner organisations or members, projects or programmes; others looked at establishing relations with unusual suspects or collaborators outside the sector. Some worked through staff assigned to programmes, others through specialized teams or units. A number have now undergone reviews. It is noteworthy to see the coincidence in review results[4]. They feed the hypothesis that each organisation has attempted to invent a wheel and carve out an own niche. Some of these common conclusions are:

- The organisation needs to think through how the approach followed might be more effectively incorporated into its strategy;
- Programme goals are formulated in very broad terms, beyond which learning priorities or any kind of learning agenda have rarely been defined. Baselines are generally lacking;
- While the knowledge programmes and staff do engage in reflective practices, overall, few resources appear to have been invested to regularly make coherent and strategic sense of the flow of information products generated, or to identify and address information gaps;
- Stock taking with a long term and holistic perspective, if and whenever it takes place, is linked with formal evaluative reviews. This weakness is aggravated if staff is distributed throughout the organisation without a central focal point;
- In general, organisational and managerial aspects were not systematically developed in synergy with the knowledge programme. This resulted in the neglect of team building, weak lines of accountability, poor connections with internal change processes and communications strategies, and insufficient linking with issues of wider strategic importance such as a learning or strategy development;
- Related to the above, through of what should be logical chains appears to be a generally weak. What expertise the organisation needs to have in-house? Where should that expertise be placed and under what kind of management? What resources are needed? What authority and accountability lines are needed?;

[4] The statements presented here are based primarily on formal reviews of knowledge programmes made available by the Dutch development organisation or found on its website. In the case of some bullets, e.g. that the organisation needs to think through how the followed approach might be more effectively incorporated into its strategy, these have been picked on from the review results in formal and informal interviews with the knowledge programme coordinator or staff between May and December 2010. To guarantee their anonymity, the sources are not named.

- Although generally the initiatives are appreciated by involved parties, their added value at a more strategic level, especially in relation to the organisation's desired impacts and theory of change is yet unproven. This relates again to the earlier mentioned issue of articulation of knowledge strategies and initiatives as add-ons rather than embedded in the wider organisation's existential strategy.

Organisations need to define more clearly where knowledge and learning fits into their own theory of social change, and consistently develop the required operational and managerial support systems and resources to enable and incentivize staff to incorporate learning into their own work and strategies. Organisations also need to think about what is realistic to expect from different types of (partner)organisations; how counterparts should be recruited for different types of knowledge and learning initiatives; how and why responsibilities are assigned; what are the effects of financially-incentivized participation; and how to balance the uneasy combination of roles of manager, mentor and funder.

Furthermore, the reviews rarely included comparative benchmarking exercises, within and especially outside the Dutch development cooperation sector. Unfortunately, taking a bird's eye view of the national and international development scene, it further adds to a sense of fragmentation, inward looking tendency and weak coherence. For a supposedly cash-strapped sector, where accountability regarding the use of public and private funds should be a leading theme, capitalizing more systematically on existing bodies of knowledge and experiences could be a central strategy. It is somewhat puzzling why this is not taking place more rigorously as a guiding principle of before-, during- and after-actions.

A number of the areas for improvement are also pointed out in a report about knowledge for development in Africa (University of Namibia/CTA/IKM Emergent, 2009). Some conclusions are presented which demand further study and reflection, such as, for example:

- There does not seem to be any systematic approaches to the M&E of KM and in fact the value of KM is largely based on potential rather than evidence of successes;
- The focus of monitoring is often on improving organisational effectiveness and gaining donor approval;
- There are many actors involved in KM with many perspectives and agendas with an inherent competition of value systems;
- Knowledge management as originally derived from the business sector, has a very organisation-based focus. Hence, the strategy adopted is an organisation-based one which does not necessarily take into account the whole development knowledge system.

The latter conclusion is especially noteworthy as it adds to the fragmentation of the knowledge landscape in IDC.

Two major, but underplayed tendencies to deal with knowledge in the development sector are presented here. Although these are propositions and need more thorough research to further substantiate or to refine them, they are troubling enough to be mentioned.
Firstly, the development cooperation literature seems to have evolved in part by quotation: authors who make statements of which the provenance and quality is unsure, which, as they are quoted over and over again, spread into belief and become 'evidence' for 'what happens' in the development sector. The negative influence of this tendency is further aggrandized when implicit and pre-empted

assumptions and sometimes prejudices play through these un-evidenced statements. The development sector is certainly not unique in this. Nevertheless, the tendency is too wide spread for comfort for a sector for which results and impact are crucial not only for its own survival, but first and foremost as a fundamental duty to its intended beneficiaries. This tendency plays to the fact that results and impacts cannot easily be measured.
A resulting hypothesis is that because of a lack of strong empirical material and a weak sense of a common body of knowledge of the sector, statements acquire an appearance of truth by being quoted and then quoted again. The knowledge and learning branch in the development sector does not escape from this tendency. Bold statements are made without further reference to empirical data. Development literature is overgrown with such statements that make no reference to provenance nor provide an idea regarding their robustness in terms of how the data has been created and what validity it has for whom, and under what conditions.

Secondly, development professionals need to strengthen their capacity to discern normative statements (based on ethical ideas, values and principles, or pragmatic aspects of what is thought to be effective) from substantive arguments that are derived from more robust sources, e.g. by providing evidentiary support. This does not imply that a scientific argument holds a monopoly to objectivity (Rehg, 2009), but that IDC can benefit from applying a degree of rigor in reaching conclusions and making claims. IDC would without doubt benefit from a more rigorous analysis, a deeper understanding of what constitutes a claim, and a better separation of what can be backed by empirical studies, and what constitutes normative propositions with a high morality, but more limited validity. This capacity to discern is especially important in a sector where a key role in its reflexivity is assigned to consultants, for example, to undertake reviews. The documentation thus produced should be treated in accordance to the roles played by the consultants. In the corporate sector, scientists are required to state their sources of funding when producing knowledge. The development sector lags behind in this as there is no comparable practice (in terms of ethical committees and guidelines for reporting) in the development sector. In consequence, a number of questions emerge:

- What implications does it have to build a (scientific) body of knowledge based on literature (partially) largely produced by consultants;
- What then constitutes data and evidence in the development sector in relation to the question whose voice counts (and is heard);
- What is legitimate knowledge;
- How do power relations translate in discourses in the development sector.

Answers to the above and other related questions demand further reflection and analysis of their influence on knowledge creation processes in the development sector.

No matter what weaknesses, gaps or oversights, important experiences and lessons gained in knowledge for IDC deserve to be brought out in the open. Examples are the range of experiences and knowledge developed with regard to participatory approaches and multi-stakeholder processes. It would be a strategic move by the Dutch development cooperation sector to join hands and embark on a process of identifying and articulating strategic and overarching lessons. Integrating knowledge derived from the establishment, implementation and revisioning of knowledge programmes in development cooperation so far, would offer a way to overcome the above mentioned two weaknesses associated with a public body of knowledge of development cooperation. It would moreover strengthen the conceptual and methodological evidence base from which can be drawn and change can be leveraged.

In a study of successful Indian NGOs (Ho, 2007), these organisations have been shown to spur an inside-outside movement of learning combined with a pattern of freeze-rebalance-unfreeze-freeze (Weick and Quinn 1999. In: Ho, 2007: 247). For example, by taking stock, an organisation helps to make patterns visible (inside-freeze); sequencing platforms at multiple levels with relevant stakeholders including scientists and politicians for collective sense-making of the results encourages reinterpreting or re-labelling of events or trends (outside-rebalance); each actor thereafter brings this re-interpretation to its own practice (unfreeze). In this way, these organisations are able to astutely couple internal and external knowledge integration with changing. Applying a similar multi-prong and multi-level approach to knowledge integration would give new impetus to the Dutch knowledge landscape.

Recently, there seems to be a convergence in attention for systemic multi-actor approaches to knowledge. Pant (2009: 5) has, for example, identified "systems approaches, specifically innovation systems thinking, as a potential candidate among a basket of choices to address the complexity of knowledge divides". Facilitating multi-actor change is the theme of the latest issue of Capacity.Org. Knowledge systems is one the topics presented in a workshop on Knowledge for Development in Africa (University of Namibia/CTA/IKM Emergent, 2009: 12).

Since 2008, the research unit (DCO/OC) of the Dutch Ministry of Foreign Affairs had identified Knowledge and Innovation Systems (KIS) as guiding concept for their strategic funding. Different from Pant (2009: 5) who posits: "Recognizing semantic ambiguity of the use of the terms, this paper posits the concept of *learning networks,* as a corollary to the concept of *learning organisations,* is inclusive of all kinds of learning communities in international development.", the choice was made for KIS as this emphasizes the relationships between knowledge (learning) and Innovation (change). Change should be at the heart of the functioning of development organisations. However, the recent cuts in budget and personnel have severely curtailed the Ministry's potential to generate guidelines for funding or maturing showcases of knowledge creation.

While relatively new to the development cooperation sector, the concept of innovation systems has its origin elsewhere, notably in the Science, Technology and Innovation (STI) studies. The next section will look more in detail into other some sectors including STI, and explore how knowledge and knowledge creation takes place in other sectors. The emerging traits will be compared with knowledge in the development cooperation sector.

3. Weaving threads: Approaches in health, agriculture and science, technology and innovation

3.1 Why Agriculture, Health, and Science, Technology and Innovation

Although interesting developments and learnings have been generated in other sectoral areas, cross-fertilization with the "young" field of knowledge management for development has not always been efficient. This is despite the facts that especially agriculture[5], but also health and STI have

[5] There is a logical and natural connection between agriculture and the Natural Resources Management (NRM) sector: resources such as water, forests, soils and vegetation have to be managed within a system, and many interconnections exist such as between husbandry and grass and forest lands.

received a great deal of attention in terms of resources and academic studies. These fields have a long standing history of generating innovative approaches and theoretical concepts related to knowledge creation, use and dissemination that have borrowed from and influenced beyond their own sectors. Examples are generations of participatory learning, planning and evaluation approaches, and the application of systems thinking, participatory technology development, and indigenous knowledge systems (both in health and agriculture). With regard to Science, Technology and Innovation, it has been included in this paper, because there is a growing influence of and recognition of innovation systems thinking that is gradually spreading in the IDC sector[6]. This latest systems approach, which has already been piloted for a number of years in both the agriculture and health sectors, can fertilize more general debates emerging in knowledge for IDC[7].

It is interesting to observe that there runs a dividing line between the sectors that seems not easy to cross. 'General' IDC practitioners and academics publish and read different journals from practitioners and academics in the agricultural, STI or health field. What practitioner working on community health strategies would scan through journals on innovations in agricultural development? Few agricultural experts will sign up for a global forum on health, even when it explicitly deals with issues related with knowledge creation. Of course, cross-fertilization between the fields does happen, but this mostly happens at a case or individual basis. Almost thirty years after the need for multi-disciplinarity was made explicit, among others, through the wide-spread promotion of integrated rural development approaches, weak interdisciplinarity, let alone transdisciplinarity (bridging work between disciplines), is still hampering the development sector. Working across disciplines requires quite some advocacy work even among like-minded colleagues (In 't Veld, 2009b). Nevertheless, transdisciplinarity is especially critical in IDC because of the interrelationships of multiple facets and dimensions of development and resulting intricateness of causes, influencing factors and effects. This requires serious reflection from especially those who push for knowledge creation and innovation in IDC.

Looking across the dividing lines, a number of trends can be identified in the sectors of Agriculture, health and STI. These resemble those in knowledge for IDC, but strikingly, precede them sometimes with a number of years:

- A move towards working in multi-stakeholder constellations can be seen in especially the agricultural and STI sectors, but also in the health sector. There is a growing tendency to bring together different actors and to work with their inputs and criteria;
- There is growing recognition of the need to work with notions of complexity and emergence. However, in the sectors of health, agriculture and STI, this growing recognition is coupled with an expanding number of concrete and relatively well articulated and documented initiatives to work with these notions. This coupling between recognition and articulated and documented initiatives allows for a progressive learning spiral in the three mentioned sectors.

A number of hypotheses are proffered about characteristics that encourage cross-sector fertilization in the sectors of Health and Agriculture[8]:

[6] Until end of 2009, the Research Unit of the Dutch Ministry of Foreign Affairs was experimenting with the introduction of the concept of Knowledge and Innovation Systems (KIS) in its policies and programme.
[7] This is gradually being picked up in several specialized niches in IDC such as some units in the IDS, Sussex, and the KM4D journal which has put out a call for contributions for its September 2010 issue.
[8] The author is less familiar with the STI sector to include it in the hypothesis. It falls outside the scope of this think piece to undertake, among others, an institutional analysis of that sector.

In both the agricultural and health sector, a number of characteristics can be distinguished that together seem to constitute an environment conducive to knowledge integration beyond the assumption that the process is more effective within sectoral boundaries:

- The presence of a number of politically and institutionally important key players who apart from playing active ánd legitimate roles in triggering and leading change and innovation, also form credible bridging nodes between domains, such as the Food and Agriculture Organisation of the United Nations (FAO), the World Health Organisation (WHO), and the Consultative Group on International Agricultural Research (CGIAR) centres;
- These organisations not only have presence from international to the national and sometimes down to local levels, but also have the mandate to play unique boundary spanning roles that can rarely be taken on by others;
- These organisations have organic links with policy-making circles as they are constituted or governed by governments and are established with often explicit policy-formulation or support roles;
- Within the sectoral boundaries, they form overlapping and interacting networks in which movement of individuals between organisations is not uncommon, and often encouraged through secondment, as consultant or otherwise;
- In the majority of cases, relationships with 'other' actors are encouraged or required. For example, NGOs have a special status in a number of forums and platforms organized by these organisations, their networks include civil organisations and so on. The organisations have intimate links with credible academic institutions, and can bank on a degree of prestige that allows job hopping between these domains to advance rather than hamper careers of outstanding experts. Examples are moves between the WHO, high-level (inter)governmental bodies and the John Hopkins University or the London School of Tropical Medicine for the health sector; and between high-level (inter)governmental bodies, CGIAR-centres, the FAO and Cornell university, or the UN University-Merit for the agricultural sector;
- Inadvertently, boundary work, boundary objects (e.g. treaties) and boundary actors are built into the institutional landscape.

Further research is needed to study the influence above sector characteristics. A deeper analysis of factors that influence the conduciveness of an environment is important to understand the wider landscape of individual knowledge initiatives.

3.2 Agriculture: Fertile ground for change

The agricultural sector can be characterized by a history of reinventing its approaches, due to widely notified failure of the Green Revolution, waves of criticism of technology transfer approaches, the appreciation of consequences of ignoring indigenous knowledge systems, and problems created by 'expert' attitudes to agricultural research and extension services. For good or for bad, lessons learnt have lead to new generations of programming in the sector, such as Participatory Technology Development (PTD), Participatory Learning Approaches (PLA) and Participatory Rural Appraisal/PME[9], farmer participatory research, Farming Systems Research, Agricultural KIS, and

[9] Rural development thinkers and agricultural experts, such as Robert Chambers, Andy Hall, Ian Scoones, Niels Roling, John Farrington and many others, overlap, cross-fertilize, encourage and challenge each other in the evolution of these approaches.

collaborative research. Sometimes these 'innovations' never took off but they also led to exciting new initiatives.

It is important to see these innovations in relation to the relatively closely-knit social tissue of the agricultural field, hypothesized to have led to an inbuilt 'reflexivity'. Four factors appear mainly to account for this reflexivity. Firstly, a number of thinkers and experts have been championing various ways of cross-boundary work and knowledge co-creation for a long period of time. People, such as Robert Chambers, have been in the field for many decades now. They are legitimate boundary workers, who have a very long and outstanding track record in the academic world, rub shoulders with politicians at national and international level and work with local farmer groups, or even bring politicians or academics along to farmers' fields.

Secondly, as mentioned above, the sector has a history of being 'forced' to move towards 'new' ways of thinking about and undertaking (international) agricultural research and development. The sector is constantly being 'supervised' beyond project evaluations, helped in part by a somewhat more continuing historical awareness, and requested to show incorporation of lessons. To an extent, lessons learnt in the CGIAR have, for example, been leading to the introduction of new generations of programming that attempt to address those lessons (Ashby, 2009): system-wide initiatives, partnership programmes, challenge programmes, eco-regional programmes.

Thirdly, knowledge integration efforts are often embedded in institutional settings where a 'natural' interaction takes place between the domains. Examples are the various existing policy arenas such as those managed by the FAO which form arenas for interaction between policy-makers, scientists and civil society, and sometimes practitioners.

Fourthly, perhaps thanks to the relatively well defined boundaries of the field and the existence of organisations and programmes that have been instituted to keep and provide an oversight of the institutional landscape (e.g. the CG-Science council, or the CG secretariat at the World Bank) and of the sector in general (e.g. FAO), a number of thorough meta-studies have been undertaken. These allow the sector to articulate and capitalize on experiences. An example is the study by Hall et al. (2006), commissioned by the World Bank to take stock of *real-world* innovation systems to assess the usefulness of the innovation systems concept for guiding investments in agricultural technology development and economic growth. The study takes a historical view by incorporating prior innovation systems work, but also a comparative one based on eight case studies of innovation systems and potential investments to support their development. The comparative analysis of the case studies is then used to develop and operationalise an intervention framework based on innovation systems concepts. The study is undertaken by an academic seconded from the UN University (UNU-Merit), who previously worked for CGIAR centres, and World Bank staff, again showing the boundary crossings.

A second example is a study commissioned by the CGIAR centres and undertaken by the Centre of International Development at Harvard University (Kristjanson et al., 2008). Based on a comparative longitudinal analysis of complex programmes, it offers generic propositions which can guide knowledge co-creation work outside the boundaries of the agricultural sector[10]. The study offers important insights in knowledge co-creation approaches. Kristjanson et al. (2008) argue that there

[10] See http://www.hks.harvard.edu/var/ezp_site/storage/fckeditor/file/pdfs/centers-programs/centers/cid/publications/faculty/wp/173.pdf

should be an explicit recognition of the need for new arenas, where partners come together to solve problems and create joint outputs, after having reached agreement to new rules of engagement that encourage and support creativity and innovation. This, in their view, could greatly improve the probability of success. Their case studies show the importance of boundary-spanning individuals and efforts for successful knowledge co-creation, and the need for institutional frameworks to be conducive for boundary work. In consequence, there is a need to further explore and understand what kinds of institutional change are required to encourage and accelerate boundary work. Kristjanson et al. (2008) hypothesize that much boundary-spanning activities, behaviour and approaches can be learned, so there is also a need to develop courses and training materials aimed at capacity building in this area. Similarly, capacity building that aims to change interactions between different groups so that together they become more effective at addressing problems, is also important. The case studies suggest that successful efforts to link knowledge with action come up with empowerment strategies aimed at 'levelling the playing field' in order to generate hybrid, co-created knowledge. Support is needed for 'clients or users' to become responsible managers of impending change processes to go beyond conventional demands of participation. 'Linking research with knowledge requires strategies to deal with the often large (and largely hidden) asymmetries of power felt by stakeholders' (Kristjanson et al. 2008).

There are many more examples of innovative lessons and concepts that can broaden thinking in and encourage the development of applicable knowledge co-creation approaches. One example is the 3M *modus operandi* developed by Biodiversity International (2008), that promotes multi-stakeholder, multi-disciplinary involvement, combines multi-methodologies, and works at multiple levels. The need to combine methodologies to effectively tackle unstructured problems is also pointed out in other fields (Regeer and Bunders, 2009).

The latest knowledge creation initiatives follow cutting-edge knowledge integration or knowledge co-creation principles[11]. They specifically aim at bringing together a wide range of actors including (agricultural) universities, private sector companies, national and international agricultural research centres, government services, farmer organisations and civil society organisations including NGOs. In these initiatives, innovation systems thinking is guiding practice. The practice is then being used to build the case - through strengthening empirical evidence and enriching theoretical thinking – for furthering agricultural innovation systems. This approach offers a glimpse in the deliberate sequencing of *piloting*, *articulating* to strengthen theoretical understandings followed by *furthering practice*. A number of publications, such as the two meta-studies described above, show further nodes of articulation for double-loop learning: theorizing is supported by meta-studies and developing meta-theories. These studies also show that good analysis and documentation of lessons are available, accompanied by strong case studies. In this way, processes of learning are accompanied by strengthening and expanding the existing theoretical and empirical base. This is reinforced by one central lesson that emerged across the different studies. Notwithstanding the unstructured character of a problem, the emergent approach followed, and other perhaps daunting issues, the studies stress the need for bringing in 'tried and tested' rigorous processes, tools and expertise in the areas of

[11] Of course, there always are exceptions, such as the Alliance for a Green Revolution in Africa (AGRA), which is funded by the Rockefeller foundation and the Bill& Melinda Gates foundation. It supports the use of science and technology to aid Africa's smallholder farmers in their urgent efforts to end widespread poverty and hunger. The emphasis is placed on scientific and technological 'solutions' (Information from : http://www.agra-alliance.org/section/about, consulted 14th January 2011). The tricky issue of new philanthropic foundations stepping over lessons learnt is important, but falls outside the scope of this paper.

stakeholder engagement, facilitation, teambuilding, and the establishment of metrics for measuring and communicating outcomes and impacts.

The history of innovation systems thinking is interesting and perhaps illustrative of the dynamics taking place in the agricultural sector. An informative, although already slightly outdated, overview is given by Lundvall et al. (2002). It offers insight in how, many years ago, the concept of production systems in economic thinking on growth and development gave rise to the concept of innovation systems. The latter concept continued to evolve in the 1990s, moving also back and forth into Science, Technology and Innovation streams. Around 2000, it started appearing more and more in publications within the agricultural sector, demonstrating the increasing number of initiatives to bridge knowledge domains (see for example: Hall et al., 2002; Barnett, 2004; Hall et al., 2006).

In short, important lessons can be learnt regarding knowledge co-creation and integration for development by tracking and analyzing how these processes are shaped and influenced in other sectors. For the agricultural sector, these can be summarized as follows:

1. Notwithstanding the unstructured character of a problem, and other issues, there is the need for bringing in 'tried and tested' processes, tools and expertise in areas where lessons exist, e.g. in stakeholder engagement, facilitation, teambuilding, and the establishment of metrics for measuring and communicating outcomes and impacts;
2. Similarly, even though an emergent approach is followed, there is a need for a deliberate sequencing of *piloting*, *articulating* to strengthen theoretical understandings followed by *furthering practice*;
3. Investing in boundary actors, work, and objects contributes greatly to successful knowledge co-creation processes;
4. Strategies are needed from the onset to deal with the often large (and largely hidden) asymmetries of power felt by stakeholders, in particular, support for 'clients or users' to become responsible managers of impending change processes going beyond conventional demands of participation.

3.3 Health: A sector to be considered in KM land

Issues and dilemmas similar to the other sectors have also emerged in the health sector: how to take into consideration people's knowledge about health and illnesses, making change happen more effectively and bringing out evidence when dealing with unstructured problems in health.

Although certainly not confined to IDC circles, health practitioners, policy-makers and academics alike have been wrestling with the concept of 'lay knowledge' (non-professional) and its influence on understanding notions of illness and health. While not necessarily accessible to lay persons or non-health professionals, there is a stream of literature on complications of combining lay and expert knowledge in health. It seems that a number of issues have spawned the development of concepts and approaches related to knowledge integration such as alternative medicine, self-medication, and indigenous knowledge. Popay et al. (1998) argue that lay knowledge offers a vitally important but neglected perspective on the relationship between social context and the experience of health and illness at the individual and population level; including lay knowledge is key to avoid misinterpretation. Popay and Williams (1996) argue that to provide an understanding of contemporary health problems that is simultaneously more robust and more holistic, theoretical and

conceptual insights on lay knowledge must be incorporated. Furthermore, that in order to accomplish this, it will be necessary to construct research questions in such a way that the conventional distinctions between science and non-science become marginal to the research process. Hirschkorn (2006) proposes an enrichment of professional knowledge by attending to dimensions of 'exclusive' versus 'everyday' knowledge forms, based on which she presents expanded professional knowledge maps. These authors all argue that incorporation of lay or everyday knowledge strengthens the robustness of the empirical base. Springett et al. (2007) state that the current emphasis on evidence-based practice privileges expert and experimental knowledge over experiential and local, while the integration of the two forms of knowledge is in practice a negotiated process.

Talking about health impact assessment (HIA), Elliott and Williams (2007) argue that the perspective of "leaving science to the scientists, and bring the scientific evidence and theory to the table to 'inform' the discussions by policy-makers, local community representatives and other lay people" is misguided:

> "First, at the simplest level, for most of the policies, programmes and projects that are discussed as possible candidates for HIA there is no robust, rigorous evidence available to inform the assessment. Secondly, the positivist approach threatens to disempower those who have a genuine interest in, concern about and knowledge of the likely effects of the change in question on their lives and neighbourhoods. Thirdly, and most importantly, it reduces the definition of legitimate evidence to a very limited range of materials, and by so doing undermines the potentially creative interplay between different forms of evidence and, equally importantly, those different frameworks of meaning without which the evidence is, quite simply, meaningless: 'The conflict between incompatible meanings cannot be resolved simply by producing evidence, not because evidence is irrelevant, but because its relevance can only be determined by the meanings themselves… Annihilating the meanings of others in the interests of truth is a form of killing' (Marris 1996: 31). HIA cannot be simply about the production of evidence, it is about creating opportunities for the examination of evidence in relation to different structures of meaning, thereby producing the possibility for different forms of 'action informed by theory', or *praxis*, to use a term that, to our loss, seems to have fallen out of favour alongside the fall of the Berlin Wall." (Elliott and Williams, 2007: 17)

Hence, they propose that the "co-creation of citizen and scientific expertise is not just a more inclusive and democratic form of science, but a more reliable, valid and effective science linked to a richer conception of knowledge, and able to inform social action" (Forrester et al 2002. In Elliott and Williams, 2007: 17).

Trends regarding moves to more systemic thinking is illustrated by the approaches followed by the Council on Health Research for Development (COHRED) and the Global Forum for Health Research, including the publication of the report on "Systems thinking for health systems strengthening" (WHO, 2009). Similar to trends in other fields, the report states that "Health systems strengthening is rising on political agendas worldwide". The New Partnership for Africa Development (NEPAD) has defined national health innovation systems and the promotion of constructive interactions among actors as a key approach to overcome lack of policy coherence, deep fragmentation of research and innovation

effort, and often enormous inefficiencies in the allocation and use of resources (Mugabe, 2007). Various international (donor) initiatives, such as the Global Fund for Malaria, TB and HIV/AIDS prefer to work through multi-stakeholder platforms and partnerships, although generally, their campaigns are not primarily knowledge-driven.

It falls outside the scope of this paper to delve deeper into the literature on the reasons for knowledge co-creation in the health sector. One concept is highlighted here that can encourage thoughts on knowledge co-creation processes in IDC: Knowledge synthesis.

Knowledge synthesis is a strategy for combining information from research with information from policymakers and practitioners in a systematic and transparent way in order to promote the use of knowledge by disease prevention workers, health care providers and their professional associations, patients and patient groups, managers of health care and disease prevention institutions, health insurers and policymakers (van Kammen and Bos, 2007: 8). Van Kammen and Bos (2007) distinguish *decision support* from *knowledge support.* The latter involves supplying the best available evidence, based on research findings and the experience of policymakers and practitioners for decision-making in practice and policy. The former focuses on translating research results and information from policy and practice in collaboration with potential users, including health care providers and their professional associations, patients and patient groups, health care institution managers, health insurers and policymakers. The outcomes include contextualised solutions, messages, conclusions, recommendations and/or scenarios that enjoy broad support, and are based on research findings and the experience of practitioners and policymakers. Both forms explicitly plan for the use and integration of different forms of knowledge, from policy-makers, practitioners and scientists. Typically, it uses both 'hard' quantitative data as well as 'soft' data regarding usability, social context and applicability. Knowledge synthesis builds on the so-called systematic reviews, often applied in the biomedical or healthcare context, but it can be applied in any field of research. A systematic review aims to provide an exhaustive summary of literature relevant to a research question (Higgings, J. and S. Green, 2009). Supposedly, a systematic review uses an objective and transparent approach for research synthesis, with the aim of minimizing bias. Van Kammen and Bos (2007) propose a number of principles and approaches for knowledge synthesis, stressing that the most appropriate form of knowledge synthesis will depend on the aims of the stakeholders, the available resources, other institutes and initiatives, and the availability of information. Although knowledge synthesis attempts to provide a methodical approach to knowledge integration, and certain phases can be distinguished[12], Van Kammen and Bos (2007) emphasize the iterative character of the process and the skills and understanding of the actors involved that are needed to respond flexibly to emerging needs and opportunities. A number of existing methodologies to facilitate the social process are presented in the context of knowledge synthesis; social mapping, multi-stakeholder analysis and multi-stakeholder platforms.

Summarising, from the literature and discussions, it appears that the same trends towards knowledge integration are emerging in the health sector as in the agricultural sector. Some useful lessons from the health sector are:

[12] Knowledge synthesis comprises a number of *phases*, which often run concurrently (Van Kammen and Bos, 2007: 9):
1. Identify problem and define synthesis question
2. Gather information from research, policy and practice
3. Process information
4. Contextualise, involve stakeholders and synthesise
5. Report findings and disseminate product

1. Everyday or lay knowledge is an existing (although not always accepted) theoretical concept in the health sector. It is accompanied by a recognition that its incorporation is not just a more inclusive and democratic form of science, but makes science more reliable, valid and effective. This is linked to a richer conception of knowledge, as it strengthens the robustness of the empirical base;
2. The integration of the lay and scientific forms of knowledge is in practice a negotiated process. Understanding and admitting is needed to open the space for identifying and developing specific methodologies;
3. One methodology which can offer ideas and guidance for knowledge co-creation approaches in development cooperation is knowledge synthesis.

3.4 The rich field of Science, Technology and Innovation studies

'What is knowledge' and 'who has knowledge' are studied in the research field of Science, Technology and Innovation (STI) studies. This field has generated many insights which could strengthen knowledge integration approaches in development cooperation. Unfortunately, it is also a field that is not necessarily easy to penetrate for development professionals as it overlaps with areas such as epistemological theory development. Also innovation studies as such, borders and interweaves with many other fields, including organisational learning, change management, network dynamics, and institutional economics.

Collins and Evans (2002, cited in Regeer and Bunders, 2009: 53) describe three waves related to 'who has knowledge' in this research field. The first wave considered knowledge and truth to be the logical outcomes of scientific procedures. Hence, scientific knowledge is considered the only source of 'true' information. The second wave sprang from the idea that scientific knowledge should be socially understood. As the borders between scientists and lay people and between values and facts are socially constructed, scientists do not have the sole right to knowledge. This resulted in a research stream of 'science in action' which called for the democratization of science and technology. Nevertheless, allowing for the participation of lay people to contribute societal knowledge was mainly for political reasons, not for reasons of knowledge (Regeer and Bunders, 2009: 57). Demand- or policy- driven research is one example of this second wave knowledge production. While methodologies used in the second wave and third wave may coincide, the contrast between the second and third wave of science studies is that actors are brought together not because it is a democratic right, but on the basis of their relevant, certified or uncertified, expertise in view of unstructured problems in which facts and opinions cannot easily be separated. The actors meet as different experts with different types of knowledges, not as lay people versus experts. Roles of scientific and societal or experiential knowledge converge without a hierarchical relation of one being appreciated over the other. Regeer and Bunders (2009: 55) state that especially "when there are many different perspectives, each of which is supported by different –sometimes contradicting - facts, opinions and values", it is important to perceive knowledge as person-related and context-dependent.

As validity of knowledge produced through these approaches is often questioned, it is important to understand the nature of this questioning as part of the debate on what constitutes knowledge. Validity of knowledge claims do not lie in their reference to an objective reality. Regeer and Bunders (2003, cited in Regeer and Bunders, 2009: 60) warn for the risk associated with emphasizing differences and thus borders between knowledges. This too easily results in the assumption that

knowledge use is disconnected from knowledge creation, and that knowledge integration is about combining separate 'pieces' of explicit knowledge. They support a vision on knowledge creation as a communicative process in which "the knowledge creation process is at the same time the process through which the knowledge is validated" as "knowledge is socially constructed and 'truth' is based on intersubjectivity". In 't Veld (2009a, cited in Regeer and Bunders, 2009: 64) states that plausibility and credibility rather than reality constitute robust criteria to assess knowledge for action for unstructured problems. This offers an important handle to judge and frame knowledge for IDC change processes, but contrasts sharply with the current push for evidence-based knowledge production.

STI studies are a rich area for obtaining ideas and insights on knowledge co-creation. There are innumerous public and private knowledge institutions that are engaged worldwide in this area. In many countries an infrastructure for STI exists, including ministries, governmental agencies, for-profit knowledge organisations and funding opportunities. A number of concepts could enrich thinking and practice of knowledge co-creation in Dutch development cooperation. However, it has to be stressed that STI is not clearly demarcated and many streams branch from and feed into the STI literature. There are a great number of potentially interesting issues and concepts that can be further explored. One example is the issue of scale of governance for knowledge management. Janssen (2010) states that knowledge depends on the context, is evaluated by multiple stakeholders and has a negotiated character. Therefore the process of knowledge development and the resulting knowledge depend on the decision making process and consequently on the governance setting. Issues of scale in governance therefore need to be incorporated when dealing with knowledge integration. Another example is that of knowledge governance proposed by Van Buuren and Eshuis (2010) as a distinct form of governance in addition to market, network and hierarchy. Knowledge governance focuses on the coordinative power of shared ideas, knowledge production and knowledge dissemination in social networks which would often have a multi level character (Marks, 1993 cited in Van Buuren and Eshuis, 2010). Knowledge governance appears to be a promising concept for complex issues in dynamic environments. A warning is needed here that it is easy to get carried away by the number of initiatives and concepts, and thus lose sight of what can be actually gained to strengthen knowledge for development and knowledge co-creation approaches in particular. Clarity regarding the linkage of knowledge for change can function as the compass required to navigate this expanding universe.

One interesting example that offers insights in this linkage is LINK, Learning, INnovation and Knowledge[13]. LINK was established in 2005 as a joint initiative of the United Nations University specialist training and research centre on science, technology and innovation policy studies (UNU-MERIT) and the FAO. Its focus is policy aspects of rural and agricultural innovation in developing countries. LINK operates through a variety of partnerships with regional organisations in South Asia, East Africa, West Africa and Latin America. LINK's aim is to "link" policy research on innovation with policymakers and practitioners in national and international development organisations and to connect innovation researchers and practitioners in different regions.

Bringing the field of STI closer to the IDC knowledge landscape, it is worth looking at the potential role of organisations that straddle fields and bring together different actors in the Dutch knowledge for development landscape.

[13] http://innovationstudies.org/index.php?option=com_content&task=view&id=13&Itemid=27. Consulted 10th December 2010.

Looking back at the previous paragraphs, in short, it is clear that the field of STI can bring interesting theoretical and practical lessons. Nevertheless, the variety and number of potentially useful concepts easily confound efforts to strengthen knowledge co-creation for development. An effective compass can be obtained by linking knowledge creation with a change frame. One pivotal lesson is that how the questions of who has knowledge and what is truth (eg. true versus false thinking in 'objective' reality) are answered, has consequences for the roles of actors and methodologies of knowledge production. It also shapes the construction of validity of produced knowledge. When constructed as rooted in an objective reality and therefore, emphasizing the difference between knowledges – one true and others not - knowledge use risks being disconnected from knowledge creation. On the contrary, focusing on plausibility and credibility can provide robust criteria to assess knowledge for action in unstructured situations.

4. Proposals for the future, experiments, guiding concepts and principles

4.1 Distinguishing characteristics of International Development Cooperation

As a start, it is important to bear in mind that development cooperation consists of loosely, sometimes near-accidentally coupled systems. These straddle many different fields with their knowledge domains and ecologies. Straying into theoretical and empirical bodies of knowledge created in widely divergent areas, could allow for efficient browsing for new insights or innovative concepts. However, to function as an enrichment strategy, as suggested here, the main factors that influence and underpin knowledge for change in IDC must be kept in mind. This is needed in order to be able to understand what should be taken into consideration when borrowing principles and ideas from other areas. Also, otherwise, browsing a wide range of other theoretical and empirical bodies of knowledge would just be confusing. Moreover, a common minimum conceptual basis and shared sense of direction will strengthen the social tissue of knowledge co-creation processes because trust and rapport between involved actors is deepened. In the end, this will enhance the effectiveness of interactions in knowledge co-creation processes. Unfortunately, in practice, this is mostly undertaken by individual organisations rather than as a collective endeavour to define the key distinguishing characteristics of knowledge for development cooperation. This is hypothesized to be an important obstruction to knowledge co-creation processes for IDC as a sector.
Without desire to enter into a new and contested field, a few suggestions of basic differences in knowledge creation processes are presented as a starter for discussions:

1. Firstly, the issue of entangled accountability chains complicates any investment in knowledge endeavours. Power dynamics that confuse basic questions such as 'Whose knowledge counts', also taint understanding and structuring of accountability chains in knowledge programmes.
2. Secondly, public scrutiny demands straightforward and short-term communication products which do not align with the dynamics of knowledge co-creation approaches.
3. A third aspect that sets knowledge for development apart is that actors can have extremely dissimilar cultural, socio-economic and political backgrounds, and differ furthermore widely in public visibility.
4. Finally, a fourth issue is the match or mismatch between available (financial and human) resources and the task at hand. As problem ownership is unrelated to, for example, funding flows, this creates continual frictions and disparities.

4.2 Knowledge of what is at hand

In a recent event, it has been stated that “NGOs have been complicit in pretending that development is simple - ‘the goats-for-Christmas syndrome’ ”(Meeting note Big Push Back, Eyben, 2010). At the same time, development professionals claim that “Development can be conceptualised as a ‘wicked problem’ or series of wicked problems” (Hellsten and Cummings, 2010) with wicked problems being characterised by their paradoxical nature: without any final solution but nevertheless urgently requiring an answer (Rittel and Webber, 1973. In: Vermaak, 2009: 116).

Neither conceptualization of development is helpful to understand a situation and map out what needs to be done. Supporting and intervening in development processes require a deep understanding of what is at hand, in order to act as agile facilitators who can recognize different situations and pull out the right approach. Conceptual and empirical progress has already been achieved in various fields offering insights how to phase interventions in complex situations and approach wicked problems. It is in the ‘actionabilization’ of concepts in which the sector needs to invest as this is where the strength of implementation must be. Otherwise, there is a risk of ‘paralysis by analysis’ (Conklin, 2006. In Vermaak, 2009: 359).

Regeer and Bunders (2009) distinguish between mode 0, mode 1 and mode 2 production of knowledge with mode 2 knowledge production being applicable for unstructured problems. Unstructured problems are those that act on several system levels with different societal actors, and where there is no consensus about the problem definition or the most suitable direction for a solution (see section 2.2 above). Mode 2 production of knowledge is characterized by a systems approach ruled by inter-subjectivity and knowledge creation is designed as a communicative process taking place within a shared practice.

Snowden (2002, 2005) proposes a number of concepts which are helpful to dissect the black box of knowledge systems and move to action. Especially helpful is the distinction between three different types of systems; complicated, complex and chaotic which can be understood through two distinctions (Snowden, 2002). The first is whether a system is comprised of many interacting agents with an agent being anything that has identity, and in consequence with changing components and their interactions that cannot be pinned down nor can cause and effect be separated. The second distinction is whether patterns of interactivity can be identified and influenced. A complex system is then one comprising many interacting identities where emerging patterns of interactivity can be influenced to create or disrupt coherence and meaning.

Vermaak (2009: 116) presents a scheme to distinguish different clusters of complexity as a basis for intervention: complexity of content, social, contextual and psychological. Examples of aspects for each category of complexity are:

- Content: multi-dimensionality, ambiguity, dilemmas;
- Psychological: touching upon personal identity and values;
- Contextual: arbitrary system boundaries (no clear distinction between internal and external), changing requirements, shifting playing fields;
- Social: multi-actor arenas, conflicting needs and interests, no central or ambiguous steering mechanisms.

Moreover, these four clusters can interact, further increasing the degree of complexity and thus deepening the need to understand better what is at hand.

Along the same line, Huppert (2009) argues for the need to distinguish between intervening in a complex situation (the situation is complex, while one intervention can be simple) and a complex intervention (the intervention itself is complex). In both cases, the methodological and other consequences need to be considered and not lumped together as it confuses decision-making on approach and methodologies.

Across theoretical bodies, this is key lesson number one: the choice for an approach depends on the situation or problem to tackle. To make knowledge integration work, development organisations and professionals need to be able to distinguish situations and phases of intervention processes. As Edwards states (2010) "… not all forms of knowledge can or should be democratically-created and controlled,……" and cross-domain knowledge integration approaches are not needed for all situations or problems. On the contrary, in the development sector where conscious spending is a must, only in certain situations and for certain problems, the – often heavy – investment required for such an approach is warranted. The concepts presented above help to discern, 'dissect' and categorize problems and situations, thus enabling a deeper reflection on choices surrounding the shaping of a knowledge creation approach in a particular situation.

Having said that, a second important lesson is that although knowledge co-creation and knowledge integration may be a relatively recent phenomenon in the development sector and beyond, there is already a substantial amount of theoretical and empirical work available. Although myriad of concepts used and invented in different sectors and initiatives easily confuse and may hamper their effective use in development initiatives, knowledge co-creation as a change process involving multi-stakeholders and bringing together multiple knowledges is taking place across a range of sectors. Much conceptual and methodological clarity already exists that can both be built upon and further enriched with insights and experiences gained in the development sector. Regularly organising reflexive benchmarking and purposeful scanning exercises beyond 'the usual suspects' in development cooperation could accelerate the pace of innovation and deepening in knowledge programmes. This paper has benefited, for example, from insights from the sectors of agricultural development, natural resources management, environmental sciences, science and technology, organisational change, innovation studies and health.

Across the different sectors, a consensus on the contours of a framework is emerging, not necessarily of detailed steps to follow, but of the broad guiding principles, such as intensified multiple stakeholder interaction, the use and combination of systemic instruments which focus simultaneously on the content, the process and the network, emergent design etc (see Regeer and Bunders, 2009). Rather than embarking on new knowledge programmes as if it were a journey to an unknown land, it would be helpful to enhance a collective basis of understanding of the current state of the art and defining jointly where and why development cooperation processes may diverge from what has been built so far. Examples of such divergent issues may be:

1. The need to carefully craft support mechanisms for bringing out knowledges of local or disadvantages groups. This may range from training to speak in groups to devising power balancing mechanisms in group work;

2. The unavoidability of multi-level channels and processes to enable interaction processes that span the levels in a specific development process.

As sense-making plays a fundamental role in knowledge generation processes, knowledge does not simply 'travel', but demands intense processes of interaction. To strengthen a sense of direction in knowledge creation, collective processes of interpretation would be indispensable.

In short, development organisations need to know when cross-domain knowledge co-creation makes sense, while at the same time, they have to recognize cross-domain knowledge integration as a complex intervention. Those engaged with knowledge work in development cooperation will need not only clarity regarding the usability of different approaches and principles under various circumstances, but also higher degree of self-awareness, of their own theory of change and alternative paradigms, of followed conceptual and methodological principles, their theoretical embedding, justification and possible alternatives. This self-awareness is essential to be able to interactively engage in knowledge co-production.

4.3 Rigor and robustness

Following on the above section, the demand on actors in the IDC sector is to follow a more robust and rigorous or methodical approach to knowledge processes. To achieve that, they need to be able to, at the same time, differentiate and systematize:

1. It would be necessary to differentiate better:
    a. Under what circumstances knowledge integration approaches provide added value, and why;
        i. What criteria can be used in IDC to categorize a problem as structured or unstructured, and situations as simple, chaotic and complex?
        ii. When should we invest in intensive and demanding iterative processes with each next step enlightening further the scope of the problem formulation, with necessary boundary work, and continuous reformulation of knowledge? What are possible gradations in investments?
        iii. In a process of knowledge co-creation, what steps and what elements are to be collective exercises, and why? E.g. Problem formulation, stakeholder identification, methodological design?
        iv. Who are partners, when (what phase of the process), with what roles, based on what expected contribution, responsibilities (type of interactions) and why?
        v. What are expected results, outcomes, for whom?
    b. Between specificity and generalization: between the possible contribution of convergence and divergence, when is diversity enriching, when is a common stand or collectivization required, of what elements (values, approaches, resources, others).
2. To further advance the existing body of knowledge, it would be necessary to strengthen systematization of:
    a. When (type of problem) can what approach best be used and why;
    b. What are empirical data/evidence (or even assumptions) that underpin choices;

c. When do you need to look internally in the organisation, when outside and why (inside-outside dynamic)? Where are areas of synergies and where of complementarity between these?;
d. Steps: even when an emergent approach is followed, steps can be informed guesses, systematically monitored and results be used to rethink next steps.

4.4 Openness without getting lost

As Ramalingam states[14], 'open innovation' approaches are essential in the aid sector for reasons of resource efficiency, and because the space for innovations needs to be negotiated throughout the system if an innovation is to be successfully operationalised.
This can assumed to be also very much true for knowledge production for IDC. Nevertheless, while open innovation approaches may also be needed, they do not equal 'do as you wish'. The development sector needs to follow principled methodological approaches much more rigorously to further build a theoretical and empirical body of knowledge co-creation for the development sector. Knowledge produced by the sector especially by practitioners needs to be able to withstand the scrutiny of not only peers, but also other stakeholders including scientists. This is a must in knowledge co-creation where credibility of the knowledge produced is a fundamental asset (see also section 3.4). This excludes simply applying concepts adopted from other sectors without systematic contextualised validation. It demands that purposeful sampling strategies of useful concepts and approaches (section 4.1) is followed up by conscious and methodological articulation of verifiable contributions and applicability.

It also demands correcting the tendency to copy claims and quote statements without first verifying the empirical basis or quality of data production. Sturdiness of knowledge co-creation processes could be enhanced by raising the capacity to understand the basis of claim-making and embed these in their theoretical streams and paradigms to see the alignment with the guiding pillars in IDC.

4.5 Systemic reflexivity

In a workshop on Knowledge for Africa (University of Namibia/CTA/IKM Emergent, 2009: 44) it was pointed out that approaches to knowledge management for development have a very organisation-based focus and do not necessarily take into account the whole development knowledge system or landscape. This is also true for the Dutch knowledge programmes (see section 2.3).

Processes of knowledge co-creation are stimulated by intensifying multi-stakeholder interactions and joint sense-making. The same applies to creating knowledge about knowledge co-creation. This brings forth the requirement of systematically and continuously strengthening the built-in reflexivity of the development cooperation sector, enhancing its capacity to change itself based on acquired self-knowledge (section 2.2). This surpasses the interests of individual organisations. Following Hoebeke (1994) and Engeström (2004), Vermaak (2009) proposes transactional organizing in working or activity systems. In this approach, the task at hand is the centre of organizing, around which the key actors are identified and included. Their self-organising capacity includes the management of relationships and boundaries in order to explicitly take account of the development knowledge

[14] Mail Ben Ramalingam posted on Km4Dev list d.d. 4th May 2010

system rather than purely organisational interests. Such an approach could be helpful to move beyond de-politicized knowledge sharing, and strengthen platforms for collective interpretation and sense-making.

4.6 Synergy, fluidity and institutional connectivity

So far, actors in the development sector indicate a lack of effective channels and purposeful fluidity between the domains of science, policy-making and practitioners. Knowledge co-creation requires different practices such as transactional organising (see Vermaak, 2009) and systematic boundary thinking and consistent organising and approaches (see, for example, Huppert, 2009; Kristjanson et al., 2008).

The Ministry of Foreign Affairs has set up a number of transdisciplinary initiatives across knowledge domains, including thematic knowledge platforms as recommended by the Advisory Council for Science and Technology Policy (AWT, 2010). Co-financing organisations support their partner organisations to engage in multi-stakeholders programmes, especially when approaches such as value-chain development are being followed. Joint submissions of project proposals by NGOs and academic institutions is a general working practice (sometimes forcibly because of funding guidelines).

However, the question is whether any of the organisations has been undertaking their efforts in a conscious way, with a view to strengthen systemic synergy, complementarity and connectivity also at the conceptual and methodological level. To overcome the fragmentation that hamper knowledge co-creation in the development sector (De Vries and Ros, 2010), changes in mindset and organising are needed, besides the strengthening of the institutional infrastructure with, for example, platforms. Edwards (2010) states that "the financial and political realities of these existing institutions also impose limits on their reformability, which can only be surpassed through new structures that are neither research groups nor NGOs, but some mixture of the two - "distributed networks for knowledge and action" for want of a better phrase, or new 'knowledge ecologies' that bring 'know-what' and 'know-how' together in creative ways". However, the literature consulted indicates that boundary work is a specialist job, requiring special skills and way of organizing (see further paragraphs). Maybe the evaluation of six years of DPRN[15] will bring forth new insights and lessons regarding this last issue.

It is not yet clear whether the Dutch Ministry of Foreign Affairs under its current leadership is willing or able to play a centralising role in strengthening the social tissue of development cooperation for knowledge co-creation. It is unknown whether, apart from the Ministry of Foreign Affairs (which itself often functions in a fragmented way), there is a council or agency with macro-overview and legitimacy to coax stake-holders to contribute together and seek synergy. The recommendation of the AWT report (AWT, 2010) to study which measures enhance synergy, complementarity and coherence apply in full to the development cooperation sector. In consequence, an institutional analysis of the current landscape which specifically looks into this in detail can help to identify a (potential) actor or actors that can play a role in:

[15] 'Linking to Learn & Learn from Linking', February 8, 2011

- Constructing informal “safe spaces” in which project managers can foster multi-stakeholder dialogues, joint definition of objectives, and end-to-end system building free from distorting dominance by groups;
- Problem definition and solving in a collaborative but ultimately user-driven manner (see, among others, Huppert, 2009; Regeer and Bunders, 2009; and Kristjanson et al., 2008).

One could also think of a system with ‘dispersed leadership’ (Bryson, 1996. In: Vermaak: 186), ‘dispersed responsibility’ (Buchanan, 2003. In Vermaak: 186) or ‘shared leadership’ (Pearce, 2004; Gibb et al., 1999. In Vermaak: 186). The guiding thought is that in such a system, leadership is not vested in one person or organisation, but that providing leadership constitutes of interaction processes that are emerging qualities of a group or network. This institutional analysis would include the identification and strengthening of existing nodes of transcription and translation (boundary organisations or individuals), build new ones and look for ways to boost their credibility.

This actor or actors require not only the agility and flexibility to move between these domains, but they also have to fulfil the criteria of independence, authority, credibility, openness and humility, and be jointly accountable to the different communities in the domains. Not only these connecting ‘nodes’ or boundary actor but knowledge and skills of development organisations in general could be enhanced with regard to integration and bridging skills: transdisciplinarity, mediation techniques, interface management and negotiation skills.

4.7 Biases and Power

Development is a negotiated process (albeit not necessarily conscious, or between ‘equal’ partners) and characteristically involves two and often more stakeholders. In consequence, any issue that relates to discourse setting including the politics of what constitutes - accepted, valid, expert etc. - knowledge or not, should form a key ingredient of a development approach.

Michael Edwards states in his opening speech on the Hivos Knowledge for Change conference (1st October 2010) that:

> “….outside the science laboratory, there are no universally-accepted data to guide decisions, only different views of which data to collect, what they mean, and how they should be used – there is, in other words, no unambiguous ‘know-what’ to underpin policy and practice. .... And given that globalization is throwing differences over religion, economics and the meaning of social change itself into even sharper relief - not eradicating them as some thought would happen - we can expect contests over knowledge to continue. So what should we do?.....
> In an age when wealth and power present a more diffuse and benign face to the world, the soft authority of knowledge is ever more important as a force for social change. That’s why the politics of knowledge – how ideas are created, used and disseminated – represents a key issue for the social change community……” (Edwards, M. 2010).

Given that working in development “for the poor” by definition implies working with differential power

bases and relations, understanding knowledge co-creation processes as negotiation and politics brings along a minimum requirement and awareness of expected and unexpected effects, and where possible, the strengthening the power bases and capacities of those who need that support. Huppert (2009) states that there is a great need to understand and manage principal-agent problems[16] especially information-asymmetries resulting from specialization.

There is another, darker side to power, which applies particularly for the development cooperation sector, that of conscious or unconsciously held biases which colour the design and development of knowledge creation processes. Despite all the proclamations and expressed intentions, literature on knowledge management and development cooperation is littered with wordings such as 'southern (knowledge) deficits'[17]; "the local knowledge, concepts, language and understanding of civil society and staff in the South"[18]. These wordings (the South can learn from us) are to be flagged. Following Land et al. (2007: 2), Ferguson et al. (2008: 37) put forward three problematic issues related to 'North'- 'South' relationships:

1. Dominance in power structures in KM4D strategies;
2. The manipulation of knowledge by amplification, distortion, omission etc.;
3. Influence of missions and convictions on the validity, objectivity and relevance of knowledge provided by development organisations.

In knowledge co-creation processes, where biases and power relations are rife, constant awareness is demanded from the different parties involved to take into consideration these three issues and carefully craft boundary work and objects.

5. By way of ending

The central questions that guided this research were formulated as:

1. Can more information be obtained on aspects that have been left uncovered in the mentioned knowledge workshops and events?
2. What elements/factors can be identified as interesting/effective to make knowledge integration work? Are there commonalities across sectors/initiatives/boundary domains?
3. Can information/evidence be obtained regarding what made change happen and why/how in which domain?
4. What are useful supporting concepts (and practices) that have emerged from non-Development Cooperation sector practices and theories?

The previous sections have laid out a number of issues in response to these questions. The

[16] "Whenever one individual depends on the action of another, an agency relationship arises with the agent being the individual taking the action, and the principal the affected party. Principal-agent problems are deficiencies in such agency relations" (Huppert, W., 2009: p. 24).
[17] "By ignoring 'multiple knowledges', a focus on internal organisational needs within Northern NGOs evolves, rather than a focus on the Southern knowledge deficits" (Hovland, 2003; King & McGrath, 2004. In: Zirschky P., 2009: 8).
[18] "A bias persists, favouring knowledge and values that are developed in the North, over the local knowledge, concepts, language and understanding of civil society and staff in the South" (Powell, 2006; Briggs & Sharp 2004)", or: "Because of this preoccupation with Northern concepts of development, non-western voices, Indigenous insights and local perspectives …."(Molenaar, 2006).

workshops held previously actually only scratched at the surface of a wealth of conceptual and empirical information that is available. There is an apparent move across sectoral streams towards knowledge co-creation as multi-level, multi-actor and multi-method approaches to unstructured problems in which boundary work and boundary spanning figure centrally. Insights have been articulated into principles how change can happen. Knowledge co-creation is a challenging, demanding, but also exciting and promising way of thinking.

This paper ends not only summarizing a number of warnings, but also enunciating hopes. First, the warnings. Knowledge co-creation is demanding in terms of time and (mental, financial, and otherwise) space. Hence, there is a great need to be able to discern when knowledge co-creation is needed, in order to be able to 'claim and show/prove'. This requires the road of knowledge co-creation to have many platforms and frequent moments for collective reflection, sense-making and transcription. The 'claim and show/prove' demand results in the need to make explicit the relationships and feedback loops between knowledge integration and change. What makes sense should guide what one learns and wants to change next. Therefore, by obligation, the link with change should be based on (joint) sense-making processes shaped in an interactive way, by making use of interfaces and boundary actors.

While the difficulties and complexities of knowledge-co-creation in practice are not to be ignored, the solace and hope is that this is in no way unthreaded territory. There do exist bodies of knowledge and experience, and articulated at that which can be re-configured, re-articulated, transcribed, or simply used. Enough knowledge has already been built up to separate out robust key guidelines, principles and methodological systems to tailor-make an initial own knowledge integration and co-creation approach for a programme, specific for an organisation or network. A great number and variety of information is available, out of which of a range of 'checklists' of guiding principles (not toolboxes) can be made, adapted or sharpened to meet specific needs and conditions. An example is given by Huppert (2009: 30-31) who lists essential elements for favourable interactions at the local level and for supportive institutional frameworks. To encourage effective processes of knowledge integration or co-creation, there is a need to step outside the confinements of 'knowledge' and 'knowledge management'. Effective approaches to knowledge integration or knowledge co-creation can be found in a great number of fields where a body of knowledge exist of experiences and insights in how-to's and what-not-to's, such as facilitating multi-stakeholder processes, institutional economics.

The development cooperation sector has much to offer. It is now the time to strengthen an articulated experience base to become accepted as full-fledged partners in knowledge creation in the Netherlands and beyond.

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About the author

Wenny Ho currently works as accountability advisor for the Europe region, Action Aid International. She has worked most recently as senior policy advisor to the Dutch Ministry of Foreign Affairs with main focus on strengthening research and knowledge systems. She also has experience working with FNV, the main Dutch confederation of trade unions, for Oxfam-Novib, Finnida and the FAO in posts ranging from advising on organisational development, strategic planning and institutional development, gender and agriculture, on social forestry. Originally trained as a forester, she holds a PhD in International Relations and Change management from the University of Amsterdam.

About the Hivos Knowledge Programme and IKM Emergent

The Hivos Knowledge Programme is *the* platform for knowledge development on issues imperative to the global development sector. The methodology used is knowledge integration. By integrating various forms of (new) knowledge - academic knowledge, practitioner knowledge, educational and cultural expressions of knowledge - new insights can be created and strategies formulated that contribute to the development of new policies and practices for the development sector.

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Contact

Humanist Institute for Cooperation
with Developing Countries (Hivos)
Raamweg 16 | P.O. Box 85565 | 2508 CG
The Hague | The Netherlands
T +31-70 376 55 00 | **F** +31-70 362 46 00
info@hivos.net | www.hivos.net

IKM Emergent
European Association of Development Research
and Training Institutes (EADI)
Kaiser Friederich Strasse 11 | 53113 Bonn |
Germany
www.ikmemergent.net