T-labs for Alternative Food Systems















T-labs for Alternative Food Systems in the Western Cape

Report on T-labs held 27 – 30 November, Grootbos Nature Reserve, South Africa

And

19-21 July Nine Oaks, Paarl, South Africa

This report should be cited as:

Zgambo, O., Pereira, L., Boatemaa, S., Drimie, S. (2018). T-labs for Alternative Food Systems in the Western Cape, Stellenbosch, South Africa: Centre for Complex Systems in Transition

This workshop report has been produced as part of the Transformation Lab (T-Lab) events hosted by the Centre for Complex Systems in Transition (CST) and the Southern Africa Food Lab at Stellenbosch University.T-labs are part of a broader research theme on food system transformations, and have been co-funded under the Guidance for Resilience in the Anthropocene: Investments for Development (GRAID) project.This work is supported in part by the National Research Foundation of South Africa (Grant Numbers 115300).

Front cover pic: Megan Lindow

Background

Globally, many countries remain food insecure and vulnerable to food insecurity despite increased production and availability of cheaper food (Ericksen et al. 2010, Reed et al. 2017). The food system, - i.e. all activities, resources and actors engaged in the production, processing, transportation, consumption and disposal of food - is impacted by many ecologically unsustainable and socially unjust dynamics and food production practices that show undesirable consequences for people and the environment (Crutzen & Stoermer 2000, Steffen *et al.* 2015, Folke 2016, and Reed et al. 2017: 202).

Locally, studies show that 11.8% of South African households are prone to experiencing hunger, while 22.3% of households have severely inadequate access to food (Statistics South Africa, 2017). Other reports estimate that 80% of all households are moderately or severely food insecure, or vulnerable to food insecurity (Zgambo 2018). Thus, as it is, the current food system does not deliver access to safe and nutritious food, especially to the food insecure, nor is it socially or ecologically sustainable (Pereira & Drimie 2016).

The Western Cape is one of the nine provinces of South Africa and is home to over 5.82 million people on 129 370 km2 of land (Statistics South Africa, 2017). By province, the prevalence of hunger in the Western Cape is the lowest in the country, at 16.4% in 2012 (Shishana et al. 2014). However, many households do not have access to adequate food, and many children are at risk of malnourishment, despite having a comparative prosperity and well-established food system (ACDI 2016, Mbhenyane 2016). The province's food system is in crisis, without any clear or shared understanding of a pathway toward a more sustainable configuration (Drimie & Pereira, 2016).

The Western Cape is prone to negative impacts caused by climatic changes, such as increased temperatures, decreased winter rainfall, longer dry spells and more frequent droughts (ACDI 2016). It is also subject to some of the trends that shape South Africa's agrarian sector, including white commercial farmers dominating over many black subsistence farmers, large corporate company domination over available or accessible food, and increased food waste (Pereira 2014). Most of the urban dwellers in the province rely on their rural counterparts and the retail sector (both formal and informal) for their food supply (Battersby, 2011). For example, the Philippi Horticultural Area is responsible for about 100,000 tonnes of Cape Towns' annual fresh produce, estimated to be 80% of the city's vegetable needs (Battersby-Lennard & Haysom, 2012).

Urban agriculture is a food security strategy for the province, especially for the poor who cannot afford to buy all their food (Frayne et al. 2009). However, because of limited space for agriculture, low income and the demand on their time, many urban poor often consume highly processed, energy-dense food that is low in nutrition and devoid of dietary diversity (Temple and Steyn, 2009). Such diets comprise energy-dense foods including refined cereals, sugar and fat, with little to no nutrition-rather than nutrition dense foods like lean meats, fish, vegetables and fruit (Faber & Drimie 2016, Mbhenyane 2016). In addition, the street food vendors who may be providing these foods often lack access to clean water, refrigeration, hygienic food preparation areas, or basic food safety training (Even-Zahav 2016, IPES-Food 2017). The townships also do not have the right infrastructures and/or facilities i.e. refrigeration and storage space to keep the food for long, and this in turn can lead to food-borne diseases (Pereira 2014, Even-Zahav 2016, Gordon et al. 2017, Resnick 2017).



Transformation Labs

There is a growing body of experience feeding the design of and motivation for social innovation labs as spaces that can be used to enable transformation or change. Olsson et al. (2004) have described transformation as a process with distinct phases: (1) preparing for change, (2) navigating the transition, and (3) building resilience of the new trajectory of development. These broad phases can be used as the components of a social innovation lab ultimately to create durable solutions to address complex, seemingly insoluble problems.

Transformation labs (or T-labs) build upon the concept of the social innovation lab guide, which is a process intended to support multi-stakeholder groups in addressing a complex social problem (Westley and Laban, 2012). Social innovation labs are used to develop a change strategy to test multiple solutions to certain challenges. The lab process is designed to create prototypes of interventions, to frame the challenge, build momentum for action, and to build innovative capacity to more effectively address the challenge. The core ideas are to facilitate a process in which people from different sectors and backgrounds, many with different perspectives, can work together creatively and co-design novel solutions (i.e. social innovations) that can be tested.

However, T-Labs are not just based on a multi-stakeholder creative search for novel solutions or interventions. T-labs are carefully designed and facilitated processes to support multi-stakeholder groups in addressing in complex SES problems through the creation of "safe" or "safe enough" spaces for developing and fostering innovations (Zgambo 2018) .AT-lab is a safe space that allows for deeper engagement with questions of sustainability by a diverse grouping of people, with the aim of addressing real-world problems and sharing of knowledge (Pereira et al. 2015).

T-Labs are fundamentally 'transformative spaces' for facilitating collective learning about the nature of a problem or challenge; learning about different kinds of possible solutions, or pathways of possible change; helping to create a collective sense of the need for change - within and beyond the stakeholders directly involved; identifying strategies for affecting change; and identifying which actors have transformative power (See Pereira et al 2018). A core emphasis is that T-labs are designed to seek for transformation, not just innovation, in social-ecological systems.

Diversity promotes resilience in systems and allows for emergence of innovation when different people from different backgrounds with their own ideas and creativity interact to address challenges (Biggs et al. 2012). As these actors engage and are empowered with information, participants can emerge more inspired and learn from practices implemented by others that they could adapt into their own field. The premise is that, if well facilitated, new ideas are bound to arise out of discussions within such a dynamic grouping that can inform a statement of action points. These will be framed as a resolution that can guide the action of participants going forward. Thus, the T-lab can serve as "fertile ground" for social-ecological transformations (SETs), which is crucial for large systems change.

Transformation requires facilitation and engagement to be effective. Certain characteristics are necessary for successful T-lab process implementation. These include a complex problem to address, a motivated and diverse group of actors that are willing to take a leadership role in addressing the challenge, a potential window of opportunity (due to increased cracks and tensions in existing regime) for niche activities to permeate through, and the goal of an action plan as an outcome of the process (Westley et al. 2013, Westley et al. 2015, Ely & Marin 2017, Pereira 2017 and Zgambo 2018).



Launching T-labs in the Cape Town area

There have been increasing food movements that support local food production within the Western Cape, through mobilising youth around food, advancing healthy and cultureally appropriate food and creating food supply sources that promote a localised social economy (Pereira 2014, Drimie & Pereira 2016). These initiatives include the Slow Food Youth Network - SFYN, the South African Food Sovereignty Campaign - SAFSC (i.e. the Ethical Coop and The Surplus People Project), and the Southern African Food Lab (SAFL) (Drimie & Pereira 2016). The innovative initiatives range from "agroecological farming with marginalized communities" to "reconstituting the terms of engagement between smallholders and retail" and "providing a powerful signal for the emergence of alternative systems" (Pereira & Drimie 2016: 3). Such alternative food systems have the potential to "restore rural areas, enrich poor nations, return fresh and wholesome food to cities, and reconnect suburbanites with the land by reclaiming lawns, abandoned lots... to use as local farms, orchards, and gardens" (Halweil 2002: 7).

These emerging food movements made the Western Cape an ideal case study area for piloting two Transformation labs (T-labs) which were convened as a collaboration between the Centre for Complex Systems in Transition (CST) at Stellenbosch University, and the Southern Africa Food Lab (SAFL) under the Guidance for Resilience in the Anthropocene: Investments for Development (GRAID) research project.

Two T-labs were held that brought together a diverse group of actors that are actively engaged in creating alternatives in the food industry of the Western Cape, including researchers, producers, food innovators and food activists. The T-labs were designed as a multi-actor innovation process that addresses pressing issues in local food systems- by aiming to better understand them, build coalitions of change, generate ideas and commitment, and test these ideas on the ground. By bringing together various actors in the "alternative" food system such as chefs, informal food vendors, activists and farmers into a safe space where they can engage in activities, dialogue and build networks, the overall aim of these T-labs was to create an enabling environment that can foster transformative processes in the food system.

T-lab 1: November 2016

The first T-lab process was hosted at Grootbos Nature Reserve, situated some 130 km outside of Stellenbosch. The T-lab aimed to build and strengthen networks within the Western Cape Province's alternative food system. There were 35 participants in total; including chefs, researchers, artists, food activists, producers, retailers, food innovators, an anthropologist, food scientist and an artisanal baker (See Appendix 1). Although participants play different roles in the food system, they have embedded in their work a desire to address sustainability or social justice issues, work together with communities towards healthier diets, or campaign for better access to food for all, especially the urban poor.

Four researchers from the CST, SAFL, and the Stockholm Resilience Centre (SRC) facilitated the T-lab, which started off with a learning journey en-route to the venue. The task was designed to aid participants acknowledge what food systems were present in the landscape between their departure point and the T-lab venue. A discussion of their observations in the evening after dinner enabled a forthright discussion on the challenges of the current food system.

The second day started off with foraging for edibles in the fynbos landscape and a guided tour of the area, learning about the indigenous flora to illustrate the diversity of food choices available when sourcing food locally and/or seasonally (Figure 1). This was aligned with a theme of the T-lab, to highlight the role that indigenous foods can play in addressing hunger, food insecurity and nutrition challenges in the Western Cape and at national level. Participants were then provoked with some realities and strengths of the dominant system to help them determine how they (as alternative food actors) can learn from these characteristics. Building on this, the Three Horizons framework (See Sharpe et al 2016) was presented to enable participants to understand how change can be projected from what is to what could be within the food system. Following this was a facilitated discussion on the roles and routines of participants (as stakeholders and actors) within the food system; what power and resources they have available, and what connections or relationships they have with other people that could enable change to take place in their sphere of influence either within or outside the system. This was to create understanding of how change is a result of connections, flow of information and resources, and how power dynamics are often at play.



Figure 1: Foraging for wild edibles in the fynbos (Photo: Megan Lindow)



Figure 2: Describing a desirable future food system for the Western Cape (Photo: Megan Lindow)

The Three Horizons framework was also used to inform the envisioning exercise on alternative food system futures .Here, participants were divided into groups of six or more and asked to creatively design (using kitchen utensils, cutlery, stones, twigs, leaves and fruit) a vision of a more desirable future food system (Figure 2). This exercise was intended to provide an opportunity for participants to represent their desired food future visually through the creation of an "artefact". This artefact would in itself convey a future using material that had been part of the foraging and kitchen activities earlier in the workshop. The "artefact" would include representation of some of the possible solutions to the challenges faced by the food system. In presenting this visually the participants were provided an opportunity to articulate and navigate challenges in different ways.

Each team was given one minute to explain their "artefact" and then the broader group were invited to comment. The team was not permitted to respond, but rather encouraged to consider the comments, many of which were critical, and improve the visual representation of what they presented. In a subsequent round they were given the chance to present again and explain how they had engaged different critiques.

This process allowed tensions to surface as there were very different perspectives within each team and the broader group. The interaction allowed new ideas to arise out of the diversity of perspectives and for team members to carefully consider and listen to views they might have disagreed with. This exercise enabled a rich environment for listening and reflecting on perspective without interrupting, which created a very interesting dynamic that enabled tensions to surface.

Reflections on the T-lab Process

The T-lab was centred on group activities, both structured and informal. Some of the structured activities included the guided tour, facilitated discussions and presentations. Most of the interactions occurred during the informal sessions, over a drink or over a meal.

Indigenous food theme

Indigenous foods were a food theme for the event, for several reasons. These include to help create awareness of available, alternative food options that can improve diversity in people's diets, and to directly support local producers and retailers. The theme was also appropriate for the T-lab as the venue is situated within a landscape of hundreds of kilometres of land full of edible, indigenous plant species, and the team there was already engaging in talks with one of the participants on how they could work with these plants in their kitchens.

Although Loubie, an indigenous food activist and innovator, oversaw the food sourcing and general preparation, many participants volunteered in the kitchen (Figures 3 and 4). This allowed them to connect in ways that they could not during the facilitated discussions and activities. It also allowed participants to gain more knowledge about some wild, local and indigenous foods that they could use to add diversity to their diets. The chef cook-off on the second night also helped participants to showcase their creative culinary skills, and exchange recipes and cooking tips with each other.

By the end of the T-lab, there was an interest among participants to include local/wild foods in their diet: "I will incorporate more indigenous and local foods into my diet, and grow some medicinal plants" "We will work together with the local food innovator to incorporate local menu at the Hotel's restaurant".



Figure 3: Loubie explaining the lunch spread

Figure 4: Participants preparing food in the kitchen

Learning process

There was a sense of uncertainty from the participants on some aspects of the T-lab process, and how it had been conducted. For example, the relevance of having facilitators from a European context especially when they did not understand the South African political history and volatile nature of the food system. Other concerns were: that the objective of the event had not been clearly stipulated, and the language used during presentations was overly theoretical in nature:

(It was) ... "too much of a Western concept. I do not think the facilitators understood the volatile nature of the South African food scene"

"What is transformation? We have been talking about it, but what is it?"

"I did not know most of the terms that were used during the discussion, but was too afraid to ask"

There were also some positive reviews on the T-lab process, including how participants had connected with other "like-minded" people.

"The T-lab process was eye-opening. I was encouraged that I am not alone – there are a lot more people longing for food revolution to take place. At times, I am tempted to quit and do something else that will make me more money. (But) they motivated me to continue farming to do something about the country/environment".

"I enjoyed the people that were there, I made lasting connections, deepened some. I was not sure why wild foods were the theme of the event --but I learned that wild foods are an important supplementary to the diet. I do not think they are not the answer to the problem of food insecurity. I also learned so much beyond the scope/theme of the T-lab".

Next Steps

Some participants seemed eager to share with others their resources, what they had learned at the workshop and/ or incorporate it into their lives. One researcher mentioned they would start giving children tour guides so that they can learn about biodiversity, while for others;

"I normally target high-end customers, but maybe I can give some of my excess vegetables to the Food bank and to the school children of the institution I work at instead of wasting it"

"I will share what I have learnt with as many people as possible"

- "I can give a tour of our wine estate to anyone who is willing"
- "I will share with my colleagues what I have learnt here"

Action Plans

Below are more examples of what has transpired since the T-lab in November 2016:

- The chefs from Grootbos worked together with the local food innovator to incorporate a local menu at the Hotel's restaurant.
- Jeremy the artisan baker established an oven at a community garden in an informal settlement. The urban farmers there now bake herbal-infused bread and are experimenting with different recipes.
- The head farmer at a learning institution now donates his excess vegetables to a nearby Early Childhood **Development Centre**
- A chef from Khayelitsha starting working with Grootbos restaurant from a connection made at the T-lab
- A retailer now donates her leftover produce after sales to a Food Bank, where it is processed into consumables

T-lab 2: July 2017

The second T-lab was designed as a consolidation workshop and included both former and new participants. It started off with a pre-lab co-design workshop in order for the local facilitator team to get a better sense of what could and should be done at this next stage in order to learn from the issues that arose in the first T-lab, especially around Western bias. The T-lab was hosted in July 2017 some 30 minutes outside of Stellenbosch and again it gathered alternative food system actors from the Western Cape to refine emergent ideas and strengthen the coalition of change in order to enable implementation. 22 participants attended the second T-lab, including: permaculture specialists, food and land activists, restaurateurs, urban farmers, and a representative from the informal traders' association, researchers, anthropologist, and indigenous food innovator (see Appendix 2). The second T-lab group was smaller compared to the first one; with less participants and a shorter process. Only two of the four researchers from the first T-lab (from the CST and the SAFL) facilitated the process.

On the first night of the T-lab process was a debrief session whereby facilitators explained the T-lab concept, gave a recap of the last T-lab process: i.e. strengths and weaknesses, and some of the results that transpired from there. These were then linked to the second T-lab and how the two are an ongoing process. Participants also took part in expressing their expectations to the rest of the group.

The second day began with a presentation of the Three Horizons framework as a means of understanding transformational change from the present to the future. This was done in response to comments that it hadn't been fully understood in the previous lab and participants wanted the chance fully to engage with the idea of transformation. After a physical activity led by one of the participants, a reflection session aided participants to acknowledge what is working for them and what is not and to be able mentally to let go of what has become redundant (Figure 5).



Figure 5: Participants sharing their reflections in a group

Figure 6: Some participants with their artefacts

A provocation was then made by Prof Julian May, the director of the Centre of Excellence in Food Security on the complex, wicked and impure nature of food and the food system. Participants were asked to consider these questions:

- I. What is the change I am seeking?
- 2. Where am I trying to make this change?
- 3. How can I make what works stronger?
- 4. What should I let go?
- 5. What could I do differently?
- 6. What do I need?
- 7. What do I need to work with?

The questions were designed to allow participants to reflect on the complexity of the food system, and some creative, actionable ways of acting within this complexity. Participants used a variety of materials such as play clay, building blocks, coloured paper, pens, seeds, glitter and balloons to present their action points to the group. Some of the ideas of the participants are highlighted in the reflections (Figure 6. For example, the development of a food charter and collaborations on several campaigns, projects and research.

Reflections on the T-lab process

Indigenous food theme

Although indigenous foods were not explicitly highlighted as an alternative food source (as was done in the firstT-lab), many of the ingredients sourced were wild and/or local foods from nearby markets and farms. Participants worked together to prepare the meals, set up eating spaces, and clean up afterwards. This allowed them to engage with each other, share food stories, recipes and food sources around the fire or over a meal. The participant who oversaw the catering, explained:

"I foraged for most of the wild ingredients, from my Cape Wild Food garden, and my own home garden. I prepared the infusions specifically for the T-lab, I brought the jam and pickles from my KOS home stock, and Lily brought some of the indigenous ingredients from the Gansbaai Urban Farm. I bought many of the vegies from a small family owned veggie farm stall in Kommetjie. The game meat came from my local Rosmead Spar"

Some of the key ingredients used in food preparation were, Wild Rosemary, Dune Spinach, Kruipvygie, Sout Slaai, Waterblommetjies, Veldkool, Dune Celery, Wild Garlic, and Kei Apple (See Figures 7,8,9). In addition, a range of aromatic herbs were used to make Gin infusions. Participants were able to learn about how to use these ingredients, where to source them and how best to keep them.

The heterogeneity of the participants also enabled them to share cooking skills and recipes from different backgrounds and cultures. Some of the recipes that were shared included homemade chocolate, cucumber yoghurt salad, tomato relish, pumpkin, potatoes soup and herbal tea.



Figure 8: Herb- infused gin and cordial bottles

Learning

The workshop process was structured to encourage learning through reflections and active participation using videos, art work, and individual and collective reflection sessions. An 'Ideas Room' was also created with flip chart paper covering an entire wall, with a ready supply of coloured pens and wax crayons, clay and water, a box of mixed Lego and building blocks, and an array of coloured paper, card, pens, pencils, postage cards and glue. A thesis produced by a Master's student involved in the previous T-lab and reports by CST were also provided as reading material for the participants.



Figure 9: A bowl of salad made with locally-sourced ingredients

Session design

Although the sessions were facilitated, participants were free to contribute to the design of the sessions and from the reflections, they felt that they owned the process as much as the facilitators did. Most felt that the relaxed atmosphere helped them get comfortable quickly and share their thoughts and aspirations.

"My experience was good. I think this workshop was powerful. Compared to other workshops which were structured from the top to the bottom. But this time we could feel that things were starting at the roots"

"This space is necessary and effective in its laid-back nature as it allows people to open up and think slowly. It was both fluid and productive."

The diversity of the participant's area of expertise and race was important for the realisation of what can be done differently in the food system for different population groups. This also created a platform that provided answers to questions, a "space to influence the influencers and to create active citizens". As one workshop participant put it:

"The T-lab...was useful and constructive: the networks and collaborations especially. I got diverse opinions and the missing links were filled."

Thus, facilitators had put in effort to meet the different needs of as many (diverse) people as possible by having a variety of activities, i.e. group food preparation, reflection time, stretching sessions, and "academic talks" such as the presentation by Prof. May.

Networking

The T-Lab enabled people in the alternative food system to network and connect beyond the silos they work in.

"It was great to meet with people from the same industry and with the same stories."

The T-Lab also encouraged participants and gave them recognition despite being ousted by others:

"The T-Lab has given us a recognition that we don't receive from others because we are challenging them on fundamental issues that they are unlikely to embrace. I think this recognition is great."



Figure 10: Participants during one of the group discussions

Action Plans

Through the networks that were created, some collaborations with clear commitments were established, including:

- To teach children with special needs how to cook
- •Teach permaculture classes in exchange for food, and to help women farmers process excess produce.
- Give disabled children material to play with
- · Develop an online application for connecting producers and customers, and managing food waste
- · Join a campaign against land dispossession
- Urban farmers and permaculture specialists to collaborate on building food gardens in community spaces
- · Pool individual efforts and resources into creating a food charter
- Introduce new connections to a wider network
- · Collaborate to bring Abalimi Bezekhaya farmers (a non-profit micro-farming organisation that promotes small-scale urban farming) together to market their goods to renowned restaurants.

Learning

Feedback from the first T-lab process had indicated several key issues, such as: • The process was too long and did not address some participants areas of concern • It had been overly academic, or advanced for some of the audience, i.e. focus on academic theories

- and not ideating practical solutions
- There were certain key people missing from the T-lab (i.e. government officials, commercial retailers, the youth and elderly.
- A lack of symmetry in the group in terms of knowledge that was present within the room, but was not honoured
- Objectives, goals and intentions of the T-lab were not made clear to participants
- Participants were not involved in the design of the T-lab process, to have a better a sense of ownership of the process
- Relevance of having some facilitators from a European context

These concerns were addressed by means of a co-design workshop before the second T-lab, to ensure that that the views and expectations of participants were incorporated into the program right from the beginning. In addition, the second T-lab was only facilitated by the local researchers, who had a clearer understanding of the social and historical dynamics at play within the room and the local food system. The facilitators started off the T-lab with clearly defined objectives, goals and intentions, and allowed feedback from the participants to shape the structure of the process, i.e. an emergent process. Overall, the process turned out to be much smoother than the first T-lab, and more relevant to the needs of the practitioners. Feedback also showed that participants felt that they were co-creators of the process and so were more eager to participate. This experience helped improve the understanding of what attributes to consider when conducting T-lab spaces in a southern context, i.e. the importance of allowing the process to be emergent and sensitive to the spatial and contextual dynamics.

Next steps

The development of a food charter was key to the issues discussed during the second T-lab. This was to be based on the South African constitution and would raise a standard that activities and governments could be held up to, supported by an independent forum and be applicable to people who have the least time to be involved in civic activities. Participants argued that the food charter offered the promise of a strong, united signal of intent to power holders and brokers, about the collective will of the 'food system we want to see' and in so doing, help to positively steer the food system towards improved outcomes. At least seven participants committed themselves to develop this further.

Since then, the Food Charter idea secured funds through South Africa's National Research Foundation Centre of Excellence (COE) for a scoping study focused on the Western Cape. This was undertaken by one of the participants of the T-lab, and submitted to the COE in late 2018. In addition, an honours student from the University of Western Cape was given a bursary by the CoE to look into the Food Charter as part of a one-year study. Both studies interacted with participants of the T-Lab who were interested in engaging. A third T-lab is now planned for May 2019, which will bring some of the same people together to explore coastal wild foods and how to create more ethical and sustainable value chains across terrestrial and marine ecosystems in the Western Cape.



Figure 11: T-lab I group photo

Conclusions

T-labs are still an emerging concept within the global southern context. The Two T-labs that were conducted within the Cape Town area managed to connect alternative food actors, and helped them re-imagine the food value chain, through group discussions, presentations and envisioning exercises. The T-labs provided a platform for learning and sharing that enabled new ideas and initiatives, relationships and collaborations, and personal resolutions to emerge from the dynamic group of participants. Although the challenges within the food system are deeply embedded and cannot be easily resolved, T-labs can potentially serve as an intervention in some aspects of the food system – especially if they are accompanied by other tools as part of an integrated approach.

References

African Climate and Development Initiative, 2016. Western Cape climate change response framework and implementation plan for the agricultural sector – 2016. Report submitted to the Western Cape Department of Agriculture and the Western Cape Department of Environmental Affairs and Development Planning. [Online].

Available: http://www.greenagri.org.za/assets/documents-/SmartAgri/Western-Cape-Climate-Change-Response-Framework-2016-FINAL-Online-V2.pdf. [2017, July 23].

Battersby, J. 2011. Urban food insecurity in Cape Town, South Africa: An alternative approach to food access. Development Southern Africa. 28(4):545–561.

Battersby-Lennard, J. and Haysom, G., 2012. *Philippi Horticultural Area*: A *City Asset or Potential Development Node?* African Food Security Urban Network, African Centre for Cities, University of Cape Town.

Battersby, J., 2016. The State of Urban Food Insecurity in Cape Town (No. 11). Southern African Migration Programme.

Biggs, R., Schlüter, M., Biggs, D., Bohensky, E.L., BurnSilver, S., Cundill, G., Dakos, V., Daw, T.M., Evans, L.S., Kotschy, K. and Leitch, A.M., 2012. Toward principles for enhancing the resilience of ecosystem services. *Annual review of environment and resources*, 37, pp.421-448.

CFS, 2012. Coming to terms with Technology, Committee on World Food Security, Thirty-Ninth Session, Rome, Italy, 15-20 October 2012.

Crutzen, P.J. and Steffen, W., 2003. How long have we been in the Anthropocene era? Climatic Change, 61(3), pp.251-257.

Drimie, S. and Pereira, L., 2016. Chapter One - Advances in Food Security and Sustainability in South Africa. Advances in Food Security and Sustainability, 1, pp. 1-31.

Ely, A. and Marin, A., 2017. Learning about 'Engaged Excellence' across a Transformative Knowledge Network. IDS Bulletin, 47(6).

Ericksen, P., Stewart, B., Dixon, J., Barling, D., Loring, P., Anderson, M. and Ingram, J., 2010. The value of a food system approach. Food security and global environmental change, 25.

Even-Zahav, E. 2016. Food security and the urban informal economy in South Africa: The state of knowledge and perspectives from street-food traders in Khayelitsha. Master's thesis; University of Stellenbosch.

Faber, M. and Drimie, S., 2016. Rising food prices and household food security. South African Journal of Clinical Nutrition, 29(2), pp.53-54.

FAO, IFAD and WFP, 2015. The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress. Rome, FAO.

FAO, 2016. The State of Food and Agriculture: Climate Change, Agriculture and Food Security, Rome: FAO.

Folke, C. 2016. Resilience. Vol. 1.

Geels, F.W., 2012. A socio-technical analysis of low-carbon transitions: introducing the multi-level perspective into transport studies. *Journal of Transport Geography*, 24, pp.471-482.

Gordon, L.J., Bignet, V., Crona, B., Henriksson, P.J., Van Holt, T., Jonell, M., Lindahl, T., Troell, M., Barthel, S., Deutsch, L. and Folke, C., 2017. Rewiring food systems to enhance human health and biosphere stewardship. *Environmental Research Letters*.

Halweil, B., 2002. Home grown: the case for local food in a global market (Vol. 163). Worldwatch Institute.

Hobcraft, P.2015. Exploring the Three Horizons Framework. [Online]. Available: https://paul4innovating.files.wordpress.com/2015/06/ opener-to-the-three-horizons-for-innovation.pdf . [2017, September 24].

Ledger, Tracy. 2016. An Empty Plate: Why We Are Losing the Battle for Our Food System, Why It Matters, and How We Can Win It Back. Np.: Auckland Park: Jacana Media.

May, J., 2017. Food security and nutrition: Impure, complex and wicked? Unpublished paper.

Mbhenyane, X. 2016. Inaugural lecture at Stellenbosch University. The contribution of 'indigenous foods' to the elimination of hidden hunger and food insecurity: An illusion or innovation?

Olsson, P., Folke, C. and Berkes, F., 2004a. Adaptive co-management for building resilience in social-ecological systems. *Environmental management*, 34(1), pp.75-90.

Olsson, P., Folke, C. and Hahn, T., 2004b. Social-ecological transformation for ecosystem management: the development of adaptive co-management of a wetland landscape in southern Sweden. *Ecology and Society*, 9(4).

Pereira, L.M., 2014. The future of South Africa's food system: what is research telling us. SA Food Lab. South Africa.

Pereira, L., Karpouzoglou, T., Doshi, S. and Frantzeskaki, N., 2015. Organising a safe space for navigating social-ecological transformations to sustainability. *International journal of environmental research and public health*, 12(6), pp.6027-6044.

Pereira L., 2016. The Transformation Labs approach to shifts to sustainability. Unpublished presentation (TKN inception).

Pereira, L. and Drimie, S., 2016. Governance Arrangements for the Future Food System: Addressing Complexity in South Africa. Environment: Science and Policy for Sustainable Development, 58(4), pp. 18-31.

Pereira, L., 2017. Coming to terms with messiness: what is a "Transformation lab"? [Online]. Available: https://steps-centre.org/blog/ coming-terms-messiness-transformation-lab/ [2017, August 16].

Pereira LM, Karpouzoglou T, Frantzeskaki N, Olsson P. 2018. Designing transformative spaces for sustainability in social-ecological systems. 23:. doi: 10.5751/ES-10607-230432

Reed, K., Collier, R., White, R., Wells, R., Ingram, J., Borelli, R., Haesler, B., Caraher, M., Lang, T., Arnall, A., Ajates Gonzalez, R., Pope, H., Blake, L. & Sykes, R. (2017). Training Future Actors in the Food System: A new collaborative cross-institutional, interdisciplinary training programme for students. Exchanges: *the Warwick Research Journal*, 4(2), pp. 201-218.

Resnick, D., 2017. Informal food markets in African's cities. In *Global Food Policy Report 2017*. Washington D.C.: International Food Policy Research Institute. [Online]. Available: http://www.ifpri.org/publication/2017-global-food-policy-report [2017, March 25].

Sharpe B, Hodgson A, Leicester G, Lyon, A. and Fazey, I. 2016. Three Horizons: A pathways practice for transformation. Ecol Soc 21:. doi: 10.5751/ES-08388-210247

Shishana, O. Labadarios, D., Rehle, T., Simbayi, L., Zuma, K., Dhansay, A., Reddy, P., Parker, W., Hoosain, E., Naidoo, P. and Hongoro, C., 2014. The South African National Health and Nutrition Examination Survey, 2012: SANHANES-1: the health and nutritional status of the nation.

Smith, A. and Raven, R., 2012. What is protective space? Reconsidering niches in transitions to sustainability. *Research policy*, 41(6), pp.1025-1036.

Westley, F., 2013. Social innovation and resilience: How one enhances the other. Stanford Social Innovation Review 11(3), 6A.

Westley, F. R., Tjornbo, O., Schultz, L., Olsson, P., C. Folke, B. Crona & Bodin, Ö. 2013. A Theory of Transformative Agency in Linked Social-Ecological Systems. *Ecology and Society*, 18(3), 27.

Westley, F., Laban, S., Rose, C., McGowan, K., Robinson, K., Tjornbo, O. and Tovey, M., 2015. Social innovation Lab guide. *The Rockefeller Foundation*, pp. 1-100.

| Name | Organisation |
|------------------------|--|
| Anique van der Vlugt | The Ethical Co-operative |
| Anna Trapido | Chef/author |
| Anna-Marie Müller | Independent researcher |
| Athenkosi Ndulula | Ikhaya Garden |
| Beenyamin Booysen | Sous Chef- Grootbos Private Nature Reserve |
| Benjamin Conradie | Executive Chef- Grootbos Private Nature Reserve |
| Carol Mills | Kaapse Liqueurs |
| Christoff Longland | Grootbos Nature Reserve |
| Claire Pauck | Boschendal |
| Diego Galafassi | Artist |
| Elke Markey | Stockholm Resilience Centre |
| Elzanne Singels | University of Cape Town |
| Etai Even-Zahav | Sustainability Institute |
| Jeremy Barty | BREADrev |
| Kobus van der Merwe | Wolfgat Restaurant |
| Lakshmi Charli-Joseph | LANCIS-UNAM |
| Laura Pereira | Stellenbosch University |
| Lily Upton | Grootbos Foundation |
| Line Gordon | Stockholm Resilience centre |
| Loubie Rusch | Making KOS |
| Megan Lindow | Stellenbosch University |
| Michele-Lee Moore | University of Victoria and Stockholm Resilience Centre |
| Mkhululi Silandela | WWF-SA |
| Mmeli Sotshononda | Western Cape Informal Traders Coalition |
| Mpumelelo Sefalane | Ikhaya Garden/Impilo Market |
| Olive Zgambo | Stellenbosch University |
| Per Olsson | Stockholm Resilience Centre |
| Rachel Wynberg | University of Cape Town |
| Roelie van Heerdan | Food artist/author |
| Scott Drimie | Southern Africa Food Lab |
| Xitshembiso | Sustainability Institute/Farmer |
| Xolisa Bangani | Ikhaya garden/Slow Food Youth Network S.A/South Africa Food Sovereignty Campaign. |
| Zayaan Khan | Slow Food Youth Network |
| Zokhanya Bikani (Zozo) | Grootbos Foundation |
| Zuko Mdatyulwa | Impilo Yabantu market |
| | |

| Name | Organisation |
|----------------------|--|
| Alexander du Plessis | Know thy Farmer |
| Athenkosi Ndulula | Ikhaya Garden |
| Elzanne Singels | University of Cape Town |
| Etai Even-Zahav | Sustainability Institute |
| Imraan Samuels | Guerilla House |
| Jade de waal | Food Jams |
| Jenny Willis | University of the Western Cape |
| Joshua Potgieter | Guerilla House |
| Jubee | Know thy Farmer |
| Laura Pereira | Centre for Complex Systems in Transition |
| Lily Upton | Grootbos Foundation |
| Loubie Rusch | Making KOS |
| Magda Campbell | Beacon Valley- Mitchells Plain Garden |
| Mmeli Sotshononda | Informal Traders Association |
| Nazeer Sonday | Philippi Horticultural Area |
| Olive Zgambo | Centre for Complex Systems in Transition |
| Sandra Boatemaa | Centre for Complex Systems in Transition |
| Scott Drimie | Southern Africa Food Lab |
| Susanna Coleman | Philippi Horticultural Area |
| Xolisa Bangani | Ikhaya Garden |
| Zuko Mdatyulwa | Chef |



Groups discussing how to build their better South African food system scenario

Participant List: T-lab 2

Appendix 2 -