Session title	Closing all the Loops of your System!			
Learning objectives:	1. Understanding the importance of creating closed loops and of stacking the functions for the elements in your system 2. Learning how and when to use the input & output analysis tool in your design process 3. Learning how to creatively use the element card game as a tool for your design process			
Resources needed:	~50 A4 papers and color pens; whiteboard; if possible an already designed land where you can visit or where the workshop takes place, otherwise an imaginary project to use an example			
Workshop time:	~2 hours (with students having previously learned about sector analysis and zone planning)			
ACTIVITY	**TIME**	**COACH**	**METHOD**	**MATERIALS**
Recap of OBREDIM design process steps	10 min.	Aks group to recap (name and shortly explain) the different steps of the OBREDIM design flow	Questions to group	Whiteboard
Introduction to the Input & Output tool	20 min.	Connect the recap to this analysis tool, to the moment in the design process when you have already done a: 1. mainframe design (water, access, structures) 2. sector analysis 3. zone planning 4. work flows And now you are at the final step to analyse & connect components (the 'what') Then ask the group: *- What are inputs?* *(nutrients, energy flows)* *- What are outputs?* *(energy flows, surplus, yields)* Then ask *- What is a self-regulating system? And why would you want this? (avoiding input from outside system → extra work, so energy; avoiding output in system not used productively → is 'pollution' and missed opportunity)* Conclude: with this tool you try to link inputs and outputs to create closed loops	Presentation and questions	Whiteboard
Try out the Input & Output Tool	20 min.	Step 1: Divide participants in groups of 3 and let them write down different components/elements in the system of the project you are visiting or let them think of an imaginary one (compost, veggie garden, etc.). Step 2: Let them write the inputs and outputs right beside the components. Then tell them to connect the inputs and outputs with lines. Ask them if they managed to close the loops Step 3: Do the same exercise altogether, but now by letting the groups share from their findings and draw this in big on the whiteboard	Independent group work	A4 papers and color pencils for each group; Whiteboard
break	*15 min*			
Intro to the Element card game	10 min.	Explain what the element card game can be used for. Brainstorm together with the group to list around 25 elements in a typical rural or urban permaculture community project	Explain and brainstorm	Whiteboard
Making a set of element cards	15 min.	Divide the group in groups of 3 and let them make their own set of element cards with the 25 (or more) brainstormed elements plus a list of prepositions (next to; inside; behind, etc.)	Creative game making	~50 A4 papers
Try out the Element card game	20 min.	Starting from the designed system example that the groups worked with before the break, let them play with the cards for 20 minutes and tell them to write their creative findings or questions down	Interactive Design game	Notebooks
Closing	10 min.	Do a round to hear some of the interesting findings or insights. And answer to final questions.	Sharing	Whiteboard

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