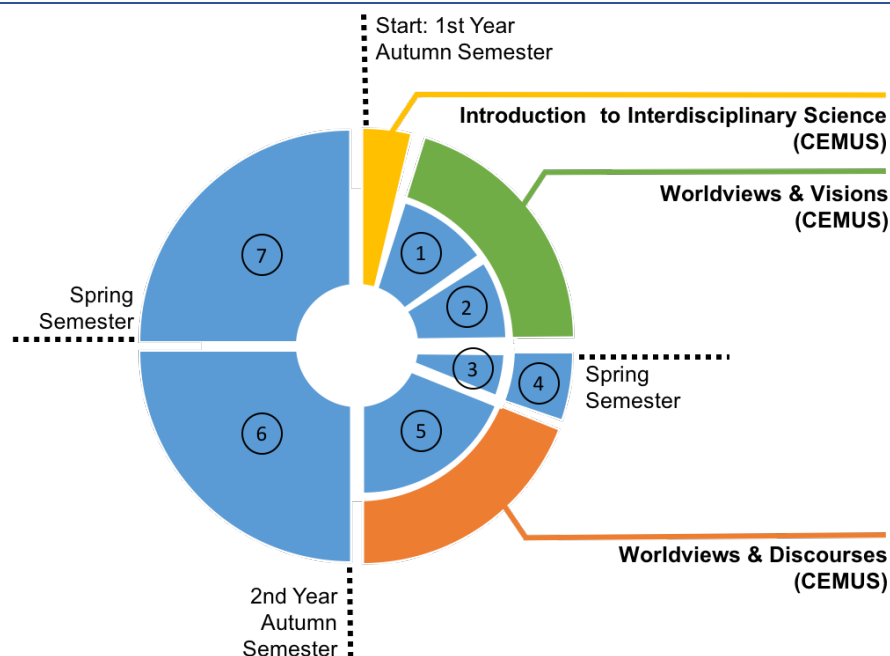


# STUDENT-REFLECTION ON LEARNING BEFORE EMBARKING ON AN INTERDISCIPLINARY MASTER PROGRAMME

The Master Programme in Sustainable Development (MSD) is a two-year Master programme held jointly between Uppsala University (UU) and the Swedish Agricultural University (SLU). Sustainable Development is a popular interdisciplinary subject and the MSD Programme attracts many more than the 60 students selected to take the programme each year. With two-thirds of the selected students from outside of Sweden, each student on the programme brings a many perspectives to the programme given their backgrounds, education and culture as well as their individual motivation to the take programme.

Three of the courses on the MSD Programme are held by CEMUS (Centre for Environmental and Development Studies) (See Figure 1) and these are designed to draw out the experiences of the students, to learn from and challenge one another. Part of the educational model at CEMUS is the emphasis on personal reflection on one's own role and the one's ability to have an impact on the local and global challenges that we face when heading towards a more sustainable society.

With this in mind, we decided to check if self-reflection exercises are valuable for the individual and for the class discussions.



**Figure 1.** An overview of the MSD Programme. The CEMUS courses (shown in yellow, green and orange) continue over the first year and have formed the basis of this study.

**Other Courses on the MSD Programme:** (1) Our Natural Resources (UU); (2) Man, Society & the Environment (SLU); (3) Environmental Assessment (UU); (4) Systems Analysis for Sustainable Development (SLU); (5) Interdisciplinary Practice (SLU); (6) Free Choice, often Internship; (7) Thesis (SLU or UU)

This project began by focusing on self-reflection in the initial weeks of the MSD Program. Allowing students time to reflect on their own background and education; ask what motivates them and what do they want to achieve from the two-year program?

Given this time to reflect before embarking on the core courses of the MSD Program, this projects asks:

- If there is time for reflection, does this enhance later discussions in and outside classrooms?
- Does this time for reflection allow students to make the most of the educational program?

## TRANSFORMATIVE LEARNING

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### MSD AT CEMUS

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The project was extended over the first year of the MSD Programme to include the other two CEMUS courses (Worldviews and Visions and Worldviews & Discourses). Below is a quick rundown of the elements of the courses related to this research project:

#### INTRODUCTION TO INTERDISCIPLINARY SCIENCE(IIS) – SEPT 2015

- Literature – course book by Derrick Jensen called ‘Walking on Water’, a book that challenges the methods of traditional schools and teaching as well as asks the pertinent questions: Who are you? What do you love? And what do you want?
- Assignment – based upon the course book that asked students to reflect upon their educational background and their choices to come to Uppsala University, start the MSD Programme and what they wanted from the programme. See Appendix A for full assignment instructions
- Course Evaluation – as part of each CEMUS course, we ask the students to fill out a quick survey about their experiences on the course and potential improvements to the course (this is usually done with paper copies). As part of this survey, we asked the students for their initial reaction to the Reflection Assignment and whether they felt this assignment would improve future class discussions.

#### WORLDVIEWS & VISIONS (WV&V) – OCT 2015-JAN 2016

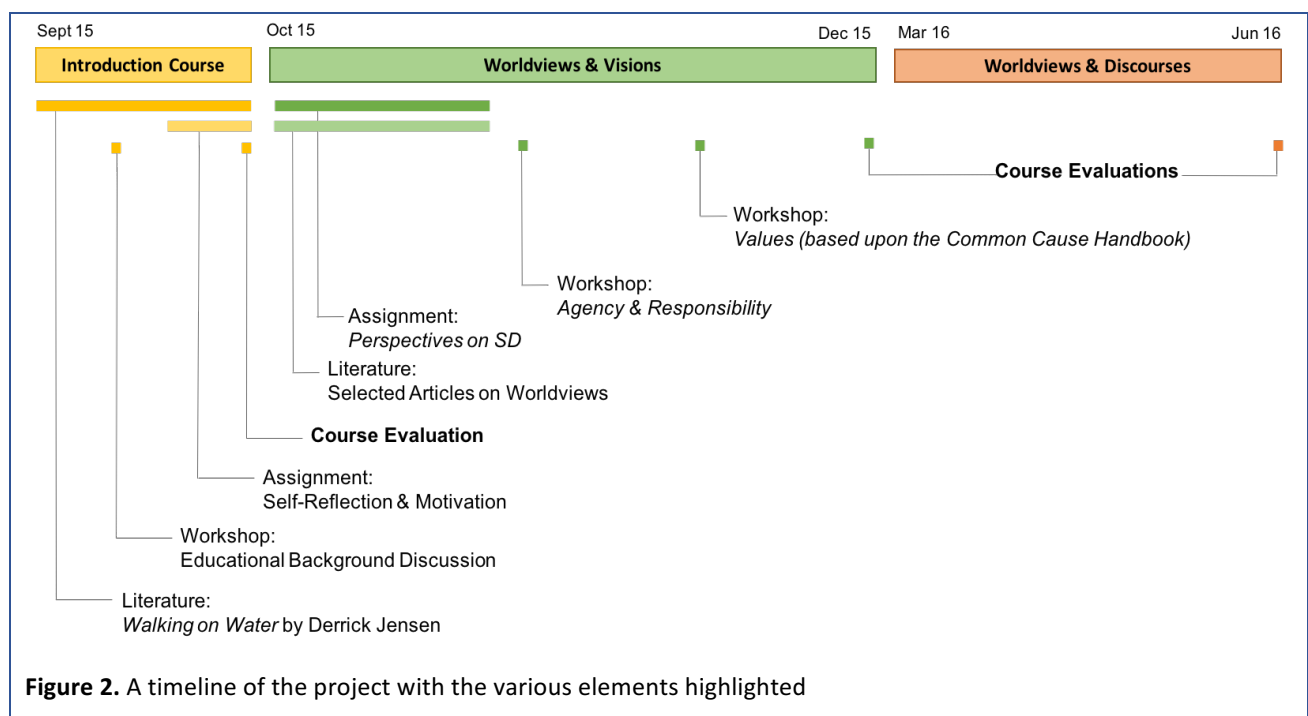
- Literature – selected articles that provided some historical information of Sustainable Development as well as looked at different perspectives on Sustainable Development
- Assignment – based upon this literature we asked the students for their own view on Sustainable Development. There was a written aspect to this assignment with small group presentations and discussions which led to a larger class discussion on Sustainable Development. See Appendix B for the assignment Instructions.

- Workshop – We held a ‘Fish Bowl’ exercise on *Agency and Responsibility* for discussions around three chosen texts: an opinion piece, personal account of direct action and academic study of the taxonomy of action. These assigned readings were read prior to a group discussion regarding their personal views on responsibility and agency within sustainability. See Appendix C for texts and Fish Bowl instructions.
- Workshop – this session focused at looking at our values or “...our guiding principles” based on the *Common Cause Handbook* by The Common Cause Foundation. This was an externally led session by a trained expert with the class split into two due to the number of students. More about this can be found at [valueandframes.org](http://valueandframes.org).
- Course Evaluation – again we asked the students some questions related to the original Reflection assignment and if they felt that class discussions had been improved as well as asking them if they felt more confident in their own views.

## WORLDVIEWS & DISCOURSES (WV&D) – MAR 2016-JUN 2016

- Course Evaluation – although there was no specific literature, assignments or sessions related to this project, we again asked the students some questions related to the original Reflection assignment to see if there had been any mid to longer-term changes

Figure 2 shows a timeline of the events described above. This project initially started off as a short-term project with the results expected in December 2015, however, as already alluded to, we waited until the end of the first year of the MSD Programme to see if there had been changes to their opinions six months on.



**Figure 2.** A timeline of the project with the various elements highlighted

## RESULTS

The initial results from the Course Evaluation after the IIS course were presented at the *Konferens i universitetspedagogisk utveckling* (TUK) held at Uppsala University on 14<sup>th</sup> October 2015 with the follow-up findings based upon the WV&V Course Evaluations presented at the *TekNat Universitetspedagogisk Konferens* on 16<sup>th</sup> March 2016.

The feedback from students was given via anonymous course evaluations at the end of each course described above. The results from these course evaluations for all three courses were as follows:

### Introduction to Interdisciplinary Science (Sept '15) – 58 Responses

#### Course Literature: *Walking on Water* by Derrick Jensen

|  |     |
|--|-----|
| How much of the book did you read? Be honest<br>(1 = I read none of the book ; 5 = I read all of the book) | 3.7 |
|--|-----|

|  |     |
|--|-----|
| Was the book meaningful to your learning experiencing?<br>(1 = without meaning; 5 = very meaningful) | 3.5 |
|--|-----|

|  |     |
|--|-----|
| Would you recommend this book to be used for next year's course?<br>(1 = No ; 5 = Yes) | 3.9 |
|--|-----|

There was also space to provide some additional comments, not all students provided comments but here is a typical selection:

- "It's a good book for reference but I wonder how much it is related to the course."
- "Really interesting and I would read it again."
- "It was great to read a completely different kind of text than is usually required."
- "... very 'braaaagy' and arrogant."
- "Good read, very inspiring."

#### Reflection Assignment

|   |     |
|---|-----|
| Instructions<br>(1 = not understandable at all; 5 = totally understandable) | 4.3 |
|---|-----|

|   |     |
|---|-----|
| Content<br>(1 = without meaning; 5 = very meaningful) | 3.7 |
|---|-----|

|   |     |
|---|-----|
| Difficulty<br>(1 = very easy, 5 = very difficult) | 2.8 |
|---|-----|

|  |     |
|--|-----|
| Did you feel that this reflection assignment will enable better discussions<br>in the rest of the programme?<br>(1 = not at all, 5 = yes, they will be greatly improved) | 3.1 |
|--|-----|

#### Additional Comments on the Assignment:

- "It would have been good to get the assignment earlier."
- "An unnecessary assignment, I've done so many before and the[y] never make a difference."
- "Didn't finish yet. But so far helped a lot to reflect. Better standpoint now. Know what I want."
- "Haven't finished it yet"
- "Have done lots of reflective sort in the past – see no benefit of it at all."
- "... hard for me to answer an open instructions as these ones. I would prefer more clear instructions."
- "It is always important to reflect."

**Worldviews & Visions (Oct – Dec '15) – 32 Responses****Assignment – Perspectives on Sustainable Development**

|   |     |
|---|-----|
| Instructions<br>(1 = not understandable at all; 5 = totally understandable)   | 4.1 |
| Content<br>(1 = without meaning; 5 = very meaningful)   | 3.9 |
| Difficulty<br>(1 = very easy, 5 = very difficult)   | 3.2 |
| Did you feel that this reflection assignment will enable better discussions in the rest of the programme?<br>(1 = not at all, 5 = yes, they will be greatly improved) | 3.5 |

**Sessions related to developing students understanding of their own and others worldview**

|  |     |
|--|-----|
| Seminar: Small group Presentations related to 'Perspectives on Sustainable Development' assignment<br>(1 = without meaning, 5 = very meaningful) | 4.1 |
| Workshop: Agency and Sustainability (a 'fish-bowl' exercise)<br>(1 = without meaning, 5 = very meaningful)                                       | 3.8 |
| Workshop: Common Cause Handbook<br>(1 = without meaning, 5 = very meaningful)  | 3.9 |

**Results from Course Evaluation regarding Reflection Exercise and class discussions**

|   |     |
|---|-----|
| Did you find the Reflection Exercise and the other elements mentioned above worthwhile for your learning experience this semester?<br>(1 = Not at All, 5 = Very worthwhile)                                       | 4.0 |
| Do you feel that you have a better understanding of your values, your beliefs and your worldviews after the Reflection Assignment?<br>(1 = I had less of an understanding, 5 = I had a much better understanding) | 4.1 |
| Do you think that this understanding improved your role in class discussions?<br>(1 = Not at All, 5 = Very much)  | 3.7 |
| Do you think that this understanding improved discussions in class as a whole?<br>(1 = Not at All, 5 = Very much)   | 4.1 |

**Worldviews & Discourses (Mar – Jun '16) – 27 Responses****Results from Course Evaluation regarding Reflection Exercise and class discussions**

|   |     |
|---|-----|
| Did you find the Reflection Exercise and the other elements mentioned above worthwhile for your learning experience this semester?<br>(1 = Not at All, 5 = Very worthwhile)                                       | 4.1 |
| Do you feel that you have a better understanding of your values, your beliefs and your worldviews after the Reflection Assignment?<br>(1 = I had less of an understanding, 5 = I had a much better understanding) | 4.2 |
| Do you think that this understanding improved your role in class discussions?<br>(1 = Not at All, 5 = Very much)  | 3.8 |
| Do you think that this understanding improved discussions in class as a whole?<br>(1 = Not at All, 5 = Very much)   | 4.0 |

The number of responses represents the number of students taking each course. Although we never received 100% course evaluations back, we did receive a return of over 90% for all courses.

## REFLECTION UPON RESULTS

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Upon initial consideration, these results are positive. From this research we can say that allowing time for students to reflect on their motivation and expectations can enhance future discussions inside and outside of the classroom, further enabling students to make the most of their education.

## REFLECTION ASSIGNMENT

The inspiration for this research was the course book used as the starting point for this project, *Walking on Water* by Derrick Jensen. It was chosen for his anarchic take on the traditional educational system, his love of writing and his strong views towards the economic and social structures of modern western society that tied into some of the issues covered by the rest of the programme. His style of writing is opinionated and can be confrontational that can provoke students and the comments regarding this book from the students revealed the split within the students and their attitude towards the associated assignment.

The Reflection Assignment clearly challenged some people to as it forced them outside of their comfort zone, instructions were clear and the assignment not found to be difficult, slightly sceptical response to the validity of self-reflection and their use in future class discussions.

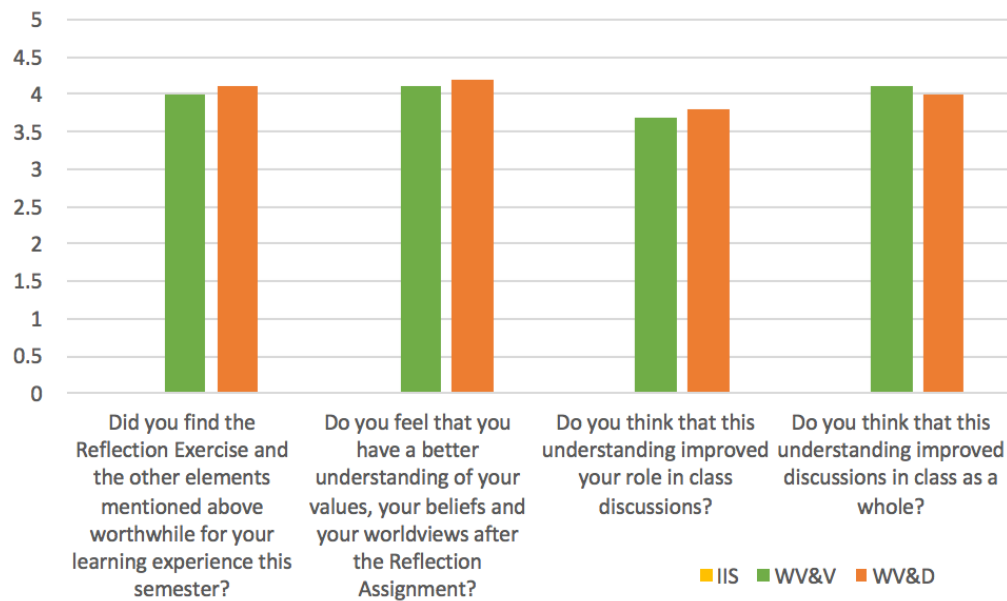
## LONG-TERM ANALYSIS

Due to time restrictions, the evaluation of the reflection assignment happened before the assignment deadline hence some comments pointing out as not having finished the assignment. Therefore, this research was extended beyond the initial stage to cover this and to test the long-term impacts of the Reflective Assignment. The results (shown in Figure 3) show that over the following academic year students felt that the self-reflection exercise was worthwhile and had helped with the discussions within the classroom.

## RESEARCH METHODOLOGY ANALYSIS

Throughout this process we've been open and honest about this research with the students that may have affected the results.

All results from this research have been obtained from anonymous Course Evaluations as part of the standard appraisal of the CEMUS courses. The courses as a whole also scored highly (IIS: 4.1/5.0, WV&V: 4.2 & WV&D 4.0). This positive attitude towards the course could have had a positive impact regarding the reflection part of the survey skewing the results.



**Figure 3:** Comparison of results of repeated long-term questions.

Note: these questions not included in the Introduction to Interdisciplinary Science course (IIS).

## CONCLUSION

From the results project, we can see that there is cause to allow space for students to question their motives for taking and thinking about what they want to achieve personally from the programme they are about to embark on.

The student feedback mechanism of course evaluation allowed students to anonymously reply to the survey relating to these, however, a selection of better questions and a separate survey could have garnered more data useful for evaluation.

These results must be taken lightly as this is the first dot on the chart for this type of study at Uppsala University. Future research should look at enhancing this process to further the support or contrast these results for student self-reflection in education.

## APPENDIX A – REFLECTION ASSIGNMENT INSTRUCTIONS

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## Personal Reflection Assignment Instructions

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*"The task we face as human beings... is to find and become who we really are." (Jensen, pp.144)*

*"Becoming critically reflective of the assumptions of others is fundamental to effective collaborative problem posing and solving. Becoming critically reflective of one's own assumptions is the key to transforming one's taken-for-granted frame of reference, an indispensable dimension of learning for adapting to change." (Mezirow, pp.9)*

You have started a two (or one) year process in to developing your understanding of Sustainable Development as well as broadening your understanding of those around you.

Inspired by the book *Walking on Water* by Derrick Jensen and Jack Mezirow's *Transformative Learning Theory*, this assignment is one that asks you to reflect upon your own background, your education - whether in formal academic surroundings, informally through friends and family or your own self-education; and what you want from this Master Programme.

### Practical Information

- Write between 800 and 1200 words.
- The deadline for this assignment is **Sunday 20<sup>th</sup> September 23:59**.
- Upload your assignment to **Studentportalen** under the 'Individual Assignment 2' file area.
- Upload your assignment in .pdf form. For the file name of the document, use your name plus assignment name e.g. 'Per Andersson – Reflective Assignment.pdf'
- You should include **at least one** reference to the course book *Walking on Water*.

Ensure to make it clear to the reader when you express your own ideas and opinions, and refer to sources when you write about other people's opinions or research. Make sure that you reference correctly. Use either footnotes, i.e. the Oxford system<sup>1</sup> or include the references in the text, i.e. the Harvard System; example: (Roseland, pp.39). There are very useful guides for referencing easily found on the Internet.

Contact us at [msd@cspdupsala.uu.se](mailto:msd@cspdupsala.uu.se) if you have any questions.

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<sup>1</sup> Eg. Roseland, Mark & Connelly, Sean (2005), *Toward sustainable communities: resources for citizens and their governments*, Rev. ed., New Society Publishers, Gabriola Island, BC

## The Assignment

Your assignment is to write a reflective piece containing between 800 – 1200 words. As this is a reflective exercise the content, i.e. what you want to write about, is open for interpretation but here are some guiding questions...

- Who are you?
  - Where are you from? Ethnically, geographically, socially? Has your background, societal norms and culture formed certain views and/or assumptions?
  - How was your education? Have you felt in control of what you have/wanted to study? Have you always liked what you've studied in the past? How was the education presented?
- What do you love?
  - What skills do you value? What do you do well?
  - What are you concerned about?
  - What are your passions in life?
  - What motivates you?
  - Who are your Heros?
- What do you want?
  - What do you want from your time at Uppsala University & SLU?
  - Think back to the first morning when we asked you to write down your answer to 'Why are you here?' and 'Why did you choose to take a Master Programme in Sustainable Development?' – What did you write? Has it changed over the past couple of weeks?
  - What do you want to gain from the MSD Programme?
  - Do you expect your beliefs, values and assumptions to be challenged during this programme? Do you want them to be challenged at all?
  - Do you have plans for after you have finished with the MSD Programme?
- How does interdisciplinarity relate to your approach when working with Sust. Dev.?

Tip: don't try and answer all the questions

Tip: these are only guiding questions, we encourage you to deviate from them and expand the assignment - the assignment is hopefully 'designed' for your benefit; the idea being that once you have an understanding of who you are, your values, your beliefs, your worldview then discussions that you have in the following courses will be grounded in an understanding of your frame of reference.

Tip: think back to the discussions that you've had with your new class mates during the sessions with Per Berg and the fish bowl exercise. Discuss these questions with a friend or family member.

## References

- Jensen, Derrick (2003) Walking on Water. White River Junction, Vermont: Chelsea Green Publishing
- Mezirow, Jack (1997), 'Transformative Learning: Theory to Practice', New Directions for Adult Education, No.74, pp.5-12.

APPENDIX B – PERSPECTIVES ON SUSTAINABLE DEVELOPMENT  
INSTRUCTIONS

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# Perspectives on Sustainable Development

## WV&V Individual Assignment 2

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This assignment relates to the following course learning outcomes:

- *be able to understand different dimensions of Sustainable development on a local, regional and global scale;*
- *be able to critically relate to and analyse the history and development of the concept of Sustainable development;*
- *be able to critically relate to and value different definitions and indicators of Sustainable development;*

### Instructions

For this assignment there will be two parts: one written and one presentation. Using the selected course literature on *Studentportalen* along with external academic sources, discuss the following elements.

- Critically examine how views on Sustainable Development inform the wider debate on humans, nature and development.
- Describe your own view of what sustainability means and critically analyze it using the relevant literature. In doing so, answer the following ‘
  - What do you perceive is the practical applications of the concept of Sustainable development?
  - What solutions do you believe are necessary to reach a state of sustainability?
- How can we bridge different views on sustainable development?

Write **1300 to 1800 words** in a PDF and upload to *Studentportalen* no later than **October 16th**.

### Written Element

Although some of the questions relate to your personal experiences, it is important that the assignment is academically written. Therefore you need to use proper academic references and resources to explain, exemplify and discuss your answers. Make sure to make it very clear to the reader when you express your own ideas and opinions, and refer to sources when you write about other people's opinions or research. Make sure that you reference correctly using the Harvard System; example: (Hornborg, 2001, p. 39). There are very useful guides for referencing easily found on the Internet.

## Presentation

Based on your answers to the above questions, you are required to present to your peers a short presentation on how you perceive Sustainable Development can be achieved. Your presentation should also include where you situate yourself along the *Sustainable Development Map* provided by Hopwood, Mellor & O'Brien (2005).

Each presentation should be 5-7 minutes in length with time for discussion and for your peers to ask questions, allow for a total of 20 minutes for the presentation. It's a good idea to end your presentation with some questions to aid the transition to discussion.

## APPENDIX C – AGENCY & RESPONSIBILITY WORKSHOP

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### LITERATURE

#### GROUP A

- D. Jensen (2009) Forget Short Showers. Orion Magazine [Online]  
<https://orionmagazine.org/article/forget-shorter-showers/>
- Gladwell, M. (2010) Small changes: why the revolution will not be tweeted [Online]  
<http://www.newyorker.com/magazine/2010/10/04/small-change-malcolm-gladwell>

#### GROUP B

- McBay, A. (2011) Chapter 6: A taxonomy of action (pp.239-276), Lierre & Jensen (eds) Deep green resistance. Seven Stories Press, New York.

#### GROUP C

- Whinston, B (2015) Beginning of the Ende, Middle of the Ende, End of the Ende [Online]  
<https://benwinstonphoto.wordpress.com/2015/08/17/beginning-of-the-ende/>

## *Fish Bowl Exercise 9th October 2015*

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This exercise is similar to the one we did during the “Introduction to Interdisciplinary Science” course. A fish bowl exercise is a small group conversation or a dialogue process held in a setting which includes a larger group of observers/listeners. A fishbowl is an experiential exercise that enables active participation through discussion by those inside the “fishbowl” and active observation by those outside of the “fishbowl.” Think of the fishbowl as a center stage with observers sitting around it. For today’s session the setup will have an inner circle of chairs for eight people with more chairs for observers set around the inner circle. You should be about 15 students per group.

The aim of today’s discussion is to bring your personal impressions and reflections from the texts that you have been assigned to read into a group discussion on the topic of Responsibility and Agency in regards to Sustainability issues. Based on your personal experiences and on your reading, you will discuss the following elements/statements:

- First, go around the fishbowl and introduce to the rest of the participants the reading you had to prepare for today. Introduce the author, their ideas and your impressions from the text. Add anything that you think is relevant.
- Define what an activist is.
- If activists are, following Gladwell, identified by their tools, is violent action
- Do you think that all forms of action (for sustainability) are relevant and have a positive impact.
- Do you agree with the statement: Personal change does not equal social change.
- What forms of activism are required to change laws without breaking them.

### **Ideas for value exercise**

-being inside the system VS being outside of it.

Personal actions have more weight than collective action