Working Title: Environmental decision making tools and foreign trade agreements for directing Vietnam’s economy into a sustainable future

Ruth Schaldach, BA (Hons) M.A. M.A., PhD candidate
Hamburg University of Technology (TUHH)
Institute of Wastewater Management and Water Protection
Eissendorfer Str. 42
21073 Hamburg

Tel. +49 (0)40 42878 3441
Mobile +49 (0)1578 8146874
1. From Doi Moi to strong export nation
2. Environmental implications and virtual water trade (Example: water)
3. Investment Agreements and environmental articles
Foreign direct investment projects licensed in period 1988 – 2011,
General Statistics Office of Vietnam

Number of projects

0,00 200,00 400,00 600,00 800,00 1000,00 1200,00 1400,00 1600,00 1800,00


Number of projects

TUHH
Technische Universität Hamburg-Harburg
Foreign direct investment projects licensed in period 1988 – 2011,
General Statistics Office of Vietnam

Total registered capital (Mill. USD) (*)

* (*)
## Investment by ownership, General Statistics Office of Vietnam

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Non-State</th>
<th>Foreign invested sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>100.0</td>
<td>42.0</td>
<td>27.6</td>
<td>30.4</td>
</tr>
<tr>
<td>1996</td>
<td>100.0</td>
<td>49.1</td>
<td>24.9</td>
<td>26.0</td>
</tr>
<tr>
<td>1997</td>
<td>100.0</td>
<td>49.4</td>
<td>22.6</td>
<td>28.0</td>
</tr>
<tr>
<td>1998</td>
<td>100.0</td>
<td>55.5</td>
<td>23.7</td>
<td>20.8</td>
</tr>
<tr>
<td>1999</td>
<td>100.0</td>
<td>58.7</td>
<td>24.0</td>
<td>17.3</td>
</tr>
<tr>
<td>2000</td>
<td>100.0</td>
<td>59.1</td>
<td>22.9</td>
<td>18.0</td>
</tr>
<tr>
<td>2001</td>
<td>100.0</td>
<td>59.8</td>
<td>22.6</td>
<td>17.6</td>
</tr>
<tr>
<td>2002</td>
<td>100.0</td>
<td>57.3</td>
<td>25.3</td>
<td>17.4</td>
</tr>
<tr>
<td>2003</td>
<td>100.0</td>
<td>52.9</td>
<td>31.1</td>
<td>16.0</td>
</tr>
<tr>
<td>2004</td>
<td>100.0</td>
<td>48.1</td>
<td>37.7</td>
<td>14.2</td>
</tr>
<tr>
<td>2005</td>
<td>100.0</td>
<td>47.1</td>
<td>38.0</td>
<td>14.9</td>
</tr>
<tr>
<td>2006</td>
<td>100.0</td>
<td>45.7</td>
<td>38.1</td>
<td>16.2</td>
</tr>
<tr>
<td>2007</td>
<td>100.0</td>
<td>37.2</td>
<td>38.5</td>
<td>24.3</td>
</tr>
<tr>
<td>2008</td>
<td>100.0</td>
<td>33.9</td>
<td>35.2</td>
<td>30.9</td>
</tr>
<tr>
<td>2009</td>
<td>100.0</td>
<td>40.5</td>
<td>33.9</td>
<td>25.6</td>
</tr>
<tr>
<td>2010</td>
<td>100.0</td>
<td>38.1</td>
<td>36.1</td>
<td>25.8</td>
</tr>
<tr>
<td>Prel. 2011</td>
<td>100.0</td>
<td>38.9</td>
<td>35.2</td>
<td>25.9</td>
</tr>
</tbody>
</table>
Foreign Direct Investment

Inflow of capital is highly related to:

**National legislation changes**

And

**Investment Agreements**
(incl. bilateral investment treaties (BITs), Double taxation treaties (DTTs), Free Trade Agreements (FTAs) and Economic Partnership Agreements (EPAs))

Eg. the Bilateral Trade Agreement with Japan (2009) – Japan (holds 2013- 31,6% of Vietnams FDI)
Exports by sectors, UNCTADstats

Merchandise trade matrix - product groups, exports in thousands of dollars, annual, 1995-2012
export market

- US 17%,
- China 12.9%,
- Japan 12%,
- South Korea 4.6%,
- Germany 4.4%,
- Malaysia 4.2%.

imports

- China 27.2%,
- South Korea 12.7%,
- Japan 8.5%,
- Singapore 8.3%,
- Thailand 5.3%,
- Hong Kong 5.2%

Trade increase and partners are highly related to FTAs and indirectly to Investment Agreements.
Conclusion

Vietnam since Doi Moi

Globalised,
Privatised
And
Industrialised
Vietnam’s Water Resources, Aquastat

- 2360 rivers (of more than 10km length)
- 8 large basins and two main river deltas: Mekong and Red River
- 30% of water resources are several lakes and groundwater resources

2006 “Vietnam’s Strategy on Water Resources to 2020” recognized, that without severe changes scarcity has to be feared
Sustainable water usage and virtual water trade

Maude Barlows (2008) sustainable water usage concept:

1. Sustainable rainwater flows for watershed recharge
2. Stop water mining by tying the exploitation speed to natural recharge times.
3. Stop pollution – increase environmental laws

Plus
- ban technologies with high water risks like hydraulic fracturing
- promote local food production
- push trade rules and national legislations discouraging international virtual water trade.
Water footprint of EU’s cotton consumption (green water)

- Green water footprint
- Million m³/yr

- 186 Mm³/yr
- 283 Mm³/yr
- 325 Mm³/yr
- 3467 Mm³/yr
- 485 Mm³/yr
- 165 Mm³/yr

EU25’s impact on green water resources

[Hoekstra & Chapagain, 2008]
Water footprint of EU’s cotton consumption (blue water)

[Hoekstra & Chapagain, 2008]
Water footprint of EU’s cotton consumption (grey water)

EU25’s impact on global water resources due to pollution

[Hoekstra & Chapagain, 2008]
Water footprints of national production (1996-2005).*

Mekonnen und Hoekstra 2011

Total water footprint [mm/yr]

- 0 - 10
- 10 - 50
- 50 - 100
- 100 - 200
- 200 - 500
- 500 - 1000
- > 1000
## Total virtual water flow export – Imports = Net losses incl. Industry

<table>
<thead>
<tr>
<th>Country</th>
<th>Net losses incl. Industry</th>
<th>Total virtual water flow export</th>
<th>Total renewable water resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>63,991</td>
<td>72,998</td>
<td>492</td>
</tr>
<tr>
<td>Canada</td>
<td>59,888</td>
<td>95,318</td>
<td>2902</td>
</tr>
<tr>
<td>USA</td>
<td>53,491</td>
<td>229,303</td>
<td>3069,4</td>
</tr>
<tr>
<td>Argentina</td>
<td>44,987</td>
<td>50,629</td>
<td>811</td>
</tr>
<tr>
<td>Brazil</td>
<td>44,767</td>
<td>67,835</td>
<td>8233</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>32,761</td>
<td>35,089</td>
<td>81</td>
</tr>
<tr>
<td>Thailand</td>
<td>27,823</td>
<td>42,94</td>
<td>409,94</td>
</tr>
<tr>
<td>India</td>
<td>25,337</td>
<td>42,565</td>
<td>1896,66</td>
</tr>
<tr>
<td>Ghana</td>
<td>17,797</td>
<td>19,516</td>
<td>53,2</td>
</tr>
<tr>
<td>Ukraine</td>
<td>16,821</td>
<td>21,016</td>
<td>139,55</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>12,148</td>
<td>12,83</td>
<td>109,61</td>
</tr>
<tr>
<td>China</td>
<td>9,839</td>
<td>72,978</td>
<td>2896,57</td>
</tr>
<tr>
<td>Hungary</td>
<td>8,658</td>
<td>12,081</td>
<td>104</td>
</tr>
<tr>
<td>Vietnam</td>
<td>7,872</td>
<td>11,289</td>
<td>891,21</td>
</tr>
<tr>
<td>Cameroon</td>
<td>7,099</td>
<td>8,342</td>
<td>285,5</td>
</tr>
<tr>
<td>Sudan</td>
<td>6,96</td>
<td>7,58</td>
<td>64,5</td>
</tr>
<tr>
<td>Tunisia</td>
<td>6,925</td>
<td>11,162</td>
<td>4,56</td>
</tr>
<tr>
<td>New Zealand</td>
<td>6,611</td>
<td>9,381</td>
<td>327</td>
</tr>
<tr>
<td>France</td>
<td>6,338</td>
<td>78,505</td>
<td>203,7</td>
</tr>
</tbody>
</table>
THE FUTURE OF INTERNATIONAL INVESTMENT AGREEMENTS
International investment agreements comprise:


Double taxation treaties (DTTs)

International agreements other than BITs or DTTs with investment provisions, e.g.

- Free Trade Agreements (FTAs)
- Economic Partnership Agreements (EPAs)
<table>
<thead>
<tr>
<th>Proposed/Under consultation and study</th>
<th>Negotiations launched</th>
<th>signed</th>
<th>Signed and in effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEAN-Hong Kong, China Free Trade Agreement</td>
<td>ASEAN-EU Free Trade Agreement</td>
<td>Trans-Pacific Partnership (TPP)</td>
<td>ASEAN Free Trade Area 01 Jan 1993</td>
</tr>
<tr>
<td>ASEAN-Pakistan Free Trade Agreement</td>
<td>Korea-Viet Nam Free Trade Agreement</td>
<td></td>
<td>ASEAN-Australia and New Zealand Free Trade Agreement 01 Jan 2010</td>
</tr>
<tr>
<td>Comprehensive Economic Partnership for East Asia (CEPEA/ASEAN+6)</td>
<td>Regional Comprehensive Economic Partnership</td>
<td></td>
<td>ASEAN-India Comprehensive Economic Cooperation Agreement 01 Jan 2010</td>
</tr>
<tr>
<td>East Asia Free Trade Area (ASEAN+3)</td>
<td>Viet Nam-Customs Union of Russia, Belarus, and Kazakhstan Free Trade Agreement</td>
<td></td>
<td>ASEAN-Japan Comprehensive Economic Partnership 01 Dec 2008</td>
</tr>
<tr>
<td></td>
<td>Viet Nam-European Free Trade Association Free Trade Agreement</td>
<td></td>
<td>ASEAN-Korea Comprehensive Economic Cooperation Agreement 01 Jun 2007</td>
</tr>
<tr>
<td></td>
<td>Viet Nam-European Union Free Trade Agreement</td>
<td></td>
<td>ASEAN-People's Republic of China Comprehensive Economic Cooperation Agreement 01 Jul 2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chile-Viet Nam Free Trade Agreement 14 Mar 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Japan-Viet Nam Economic Partnership Agreement 01 Oct 2009</td>
</tr>
</tbody>
</table>
1. Standards provide long term economical advantages instead of just short term gains.

2. Standards should be on the long run internationally as this secures to avoid a race to the bottom due to competition.

3. Even when it is not likely that the WTO would include social and environmental standards in FTA negotiations these standards find increasing acceptance.

4. Financial support and aid can be helpful to establish standards.

5. Sanctions for not non compliance are necessary, but need to be agreed on with local experts.
Conclusion & Proposal for securing quality investment

1. Sectors need to be evaluated, if Vietnams ressources are capable of harboring their growth and under which conditions.

2. Due to globalisation and market liberalisation are production plans are not any more a suffizient instrument to influence production quantities and what gets produced in order to alter trade into more sustainable trading patterns with products produced under sustainable conditions. International Investment Agreements and other mulilateral agreements need to be used.

3. Consideration of environmental effects already in the negotiation process of Agreements and to use for example the water footprint to estimate the water impact of attracting sector investment. Social and environmental articles in Agreements can be one additional tool in negotiations.

4. Infrastructure for water management on a technical and political level needs to be fostered and linked to Agreement negotiations and therefore International Relations of Vietnam.(eg waste water treatment, basin management, aso.)
References

Aquastat: Vietnam. Online accessible

Asia Regional Integration Center: Tracking Asian Integration. Online accessible

CIA: World Fact Book - Vietnam. Online accessible


EXTRA SLIDES
Water Problems

Non Anthropogenic:

• Distribution of water resources.
• Long coastline (increases danger of salination)
• Flooding
• Aquifers have natural arsenic poisoning levels.
• Tropical Climate

Anthropogenic:

Temporal dimension - Not preventable as caused in the past:

• Soil contamination levels from the war: eg. agent orange. (Unabhängiges Institut für Umweltfragen)
• Past contaminated industrial sites.

Multiscalar, multiformal and multicausal dimension-Difficult to influence, multilateral approach necessary:

• Vietnam is a downstream country and suffers from upstream pollution levels.
• Climate Change

Easier to regulate, influence or prevent (quality and quantity):

• Pollution through production and water usage:
  – Mining
  – Farming
  – Manufacturing
• Urbanisation
• Tourism
GDP impact vs Waterfootprint (including grey, green and blue water)

Example 1:
Vietnam and Thailand are responsible for 50% of the global rice exports, but agriculture has only an export value of 18,7.

Example 2:
Organic vs mainstream agriculture
- Water supply in munic

Each product needs evaluation on its long term implications produced in different set ups.

Table 7: Vietnam 2009

<table>
<thead>
<tr>
<th>Breakdown in economy's total exports</th>
<th>Breakdown in economy's total imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>By main commodity group (ITS)</td>
<td>By main commodity group (ITS)</td>
</tr>
<tr>
<td>Agricultural products</td>
<td>18,7</td>
</tr>
<tr>
<td>Fuels and mining products</td>
<td>16,0</td>
</tr>
<tr>
<td>Manufactures</td>
<td>64,6</td>
</tr>
</tbody>
</table>

(Online Asia Times 2010)