THE SUPPLY CHAIN OF COCONUT PRODUCTS IN THE PHILIPPINES IN SUPPORT OF GLOBAL SUSTAINABILITY OF THE COCONUT INDUSTRY

46th APCC COCOTECH Meeting
Colombo, Sri Lanka
July 7-11, 2014
The Philippine coconut industry in a nutshell

The Philippine Coconut Supply Chain
- Coconut Husk
- Coconut Shell
- Coconut Water
- Coconut Meat

Outlook

Closing Statement
# PH COCO EXPORT EARNINGS
*(In Million US$)*

<table>
<thead>
<tr>
<th>Commodity</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coconut Oil</td>
<td>588</td>
<td>1,257</td>
<td>1,408</td>
<td>992</td>
<td>974</td>
</tr>
<tr>
<td>Desiccated Coconut</td>
<td>146</td>
<td>153</td>
<td>287</td>
<td>200</td>
<td>181</td>
</tr>
<tr>
<td>Copra Meal</td>
<td>48</td>
<td>78</td>
<td>59</td>
<td>115</td>
<td>144</td>
</tr>
<tr>
<td>Oleochemicals</td>
<td>13</td>
<td>17</td>
<td>35</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Copra</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td><strong>TOTAL MAJOR</strong></td>
<td>794</td>
<td>1,506</td>
<td>1,790</td>
<td>1,325</td>
<td>1,313</td>
</tr>
<tr>
<td>Coco Shell products</td>
<td>37</td>
<td>51</td>
<td>47</td>
<td>96</td>
<td>102</td>
</tr>
<tr>
<td>Non-traditional</td>
<td>53</td>
<td>72</td>
<td>121</td>
<td>124</td>
<td>104</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>884</td>
<td>1,627</td>
<td>1,957</td>
<td>1,544</td>
<td>1,518</td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
### TOP TEN AGRICULTURAL EXPORTS
January to December 2013P
(Quantity in ‘000 MT, FOB Value in Million US$)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUANTITY</th>
<th>FOB VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Coconut oil (Crude and refined)</td>
<td>962</td>
<td>951</td>
</tr>
<tr>
<td>2. Banana, Fresh</td>
<td>2,877</td>
<td>912</td>
</tr>
<tr>
<td>3. Tuna</td>
<td>50</td>
<td>665</td>
</tr>
<tr>
<td>4. Pineapples and Pineapple products</td>
<td>699</td>
<td>417</td>
</tr>
<tr>
<td>5. Centrifugal Sugar</td>
<td>297</td>
<td>250</td>
</tr>
<tr>
<td>6. Tobacco Manufactured</td>
<td>7</td>
<td>240</td>
</tr>
<tr>
<td>7. Copra Oil Cake</td>
<td>409</td>
<td>240</td>
</tr>
<tr>
<td>8. Seaweeds and Carageenan</td>
<td>23</td>
<td>230</td>
</tr>
<tr>
<td>9. Desiccated Coconut</td>
<td>33</td>
<td>181</td>
</tr>
<tr>
<td>10. Shrimps and Prawns</td>
<td>16</td>
<td>140</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>5,373</strong></td>
<td><strong>4,225</strong></td>
</tr>
</tbody>
</table>

Source: National Statistics Office
## PHILIPPINE COCONUT SITUATION

<table>
<thead>
<tr>
<th></th>
<th>HECTARAGE</th>
<th>BEARING TREES</th>
<th>NUT HARVEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In ‘000 Hectares</td>
<td>Population (In Million)</td>
<td>In Million Nuts</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>2012</td>
<td>% Share</td>
</tr>
<tr>
<td>LUZON</td>
<td>1,134</td>
<td>1,142</td>
<td>32.0</td>
</tr>
<tr>
<td>S. Tagalog &amp; Bicol</td>
<td>1,084</td>
<td>1,092</td>
<td>30.6</td>
</tr>
<tr>
<td>Rest of Luzon</td>
<td>50</td>
<td>50</td>
<td>1.4</td>
</tr>
<tr>
<td>VISAYAS</td>
<td>667</td>
<td>669</td>
<td>18.7</td>
</tr>
<tr>
<td>MINDANAO</td>
<td>1,761</td>
<td>1,763</td>
<td>49.3</td>
</tr>
<tr>
<td>PHILIPPINES</td>
<td>3,562</td>
<td>3,574</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source of basic data: Bureau of Agricultural Statistics
PHILIPPINE COCONUT PRODUCTION

Year

2014f
2013
2012
2011
2010
2009

In '000 MT

0 500 1,000 1,500 2,000 2,500 3,000

Sources of basic data: Philippine Coconut Authority
Industry reports to UCAP Research

f Forecast
# PH PROCESSING CAPACITY

<table>
<thead>
<tr>
<th>Product</th>
<th>No. of Mills/Plants</th>
<th>Annual Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oilmilling</td>
<td>69</td>
<td>4.826 Million MT Copra</td>
</tr>
<tr>
<td>Refining</td>
<td>43</td>
<td>1.642 Million MT RB/RBD Oil</td>
</tr>
<tr>
<td>Desiccated Coconut</td>
<td>11</td>
<td>198,479 MT DCN product</td>
</tr>
<tr>
<td>Activated Carbon</td>
<td>11</td>
<td>101,075 MT</td>
</tr>
<tr>
<td>Oleochemicals</td>
<td>13</td>
<td>645,360 MT output of various chemicals</td>
</tr>
<tr>
<td>Coco Biodiesel</td>
<td>9</td>
<td>422,600 MT output</td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
## Marketing Channels of Coconut Products

### Primary Products
- **Nuts**
  - Gathered: 15,862 B
  - Number of Trees: 344 M*
  - Hectarage: 3.574 M
  - Value of Production: 88.8 B

### Processors
- **Copra**
  - Oil Millers
- **Husked Nuts**
  - Desiccated Coconut
  - VCO / Coco Milk
- **Coco Shell**
  - Coco Shell Charcoal / Coco Shell Powder / Activated Carbon
- **Husk**
  - Coir
- **Water**
  - Processors

### Markets
- **Foreign Market 62.45%**
- **Domestic Market 37.55%**

### United States
- Grated Coconut Meat
- Bukayo
- Coconut Vinegar
- Coconut Flour
- Virgin Coconut Oil

### Europe
- Copra
- Coconut Oil
- Desiccated Coconut
- Hydrogenated CNO
- Coconut Coir
- Virgin Coconut Oil
- Coco Handicrafts

### Korea
- Copra
- Desiccated Coconut
- Copra Meal
- Activated Carbon
- Coconut Coir
- Coconut Shell Powder
- Copra Meal
- Coconut Flour

### China
- Coconut Oil
- Oleochemicals
- Coconut Shell Charcoal
- Acid Oil
- Desiccated Coconut
- Fresh Coconut
- Glycerin

### Japan
- Coconut Oil
- Oleochemicals
- Coco Chemicals
- Coco Milk Powder
- Coco Shell Charcoal
- Liquid Coco Milk
- Activated Carbon
- Nata de Coco

### Others
- Copra
- Coconut Oil
- Coconut Meal
- Alkanolamide
- Desiccated Coconut
- Coconut Chips
- Coconut Flour
- Coconut Shell Charcoal
- Coconut Water
- Fresh Coconut
- Shampoo
- Activated Carbon
- Oleochemicals

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1/ Figures as of 2012
* Bearing trees only
M Million
B Billion

Sources of basic data: Bureau of Agricultural Statistics
Philippine Coconut Authority
I. HUSK SECTION

Whole nuts → Husk

FARMERS → PROCESSORS → MARKETERS → CONSUMERS

- Baled Coir
- Peat
- Net
- Twine
- Pads/Liners
- Doormats

Domestic

Export

- China
- Korea
- Taiwan
- Singapore
- Japan
- USA
- United Kingdom
# EXPORT OF COIR AND COIR PRODUCTS
(Average 2009-2013)

<table>
<thead>
<tr>
<th>Products</th>
<th>Volume (MT)</th>
<th>Value (USD Million FOB)</th>
<th>Unit Price (USD/MT FOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baled coir</td>
<td>9,282</td>
<td>2.837</td>
<td>305.65</td>
</tr>
<tr>
<td>Coir twine</td>
<td>1,016</td>
<td>1.754</td>
<td>1,728.08</td>
</tr>
<tr>
<td>Pads/liners</td>
<td>16</td>
<td>0.021</td>
<td>1,312.15</td>
</tr>
<tr>
<td>Coir net</td>
<td>19</td>
<td>0.044</td>
<td>2,315.79</td>
</tr>
<tr>
<td>Coco peat</td>
<td>2,445</td>
<td>0.572</td>
<td>233.95</td>
</tr>
<tr>
<td>Doormats</td>
<td>850*</td>
<td>0.002</td>
<td>2.35</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12,777**</td>
<td>5.228</td>
<td></td>
</tr>
</tbody>
</table>

* Square meters
** Excludes doormats

Source of basic data: Philippine Coconut Authority
EX B-PORT VALUE OF COIR AND COIR PRODUCTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

USD 5,228,324

COIR PRODUCTS

- Baled coir: 54.2%
- Coir twine: 33.5%
- Coco peat: 10.9%
- Others: 1.3%

USD 5,228,324
II. COCO SHELL SECTION

From FARMERS to CONSUMERS:

- Whole nuts
- Shell

FARMERS → PROCESSORS

- Shell powder
- Charcoal
- Activated carbon
- Handicrafts

MARKETERS → CONSUMERS

- Domestic
- Export
  - Japan
  - China
  - Germany
  - USA
## EXPORT OF COCONUT SHELL PRODUCTS
(Average 2009-2013)

<table>
<thead>
<tr>
<th>Products</th>
<th>Volume (MT)</th>
<th>Value (USD Million FOB)</th>
<th>Unit Price (USD/MT FOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coco shell powder</td>
<td>461</td>
<td>0.096</td>
<td>208.24</td>
</tr>
<tr>
<td>Coco shell charcoal</td>
<td>41,697</td>
<td>16.151</td>
<td>387.34</td>
</tr>
<tr>
<td>Activated carbon</td>
<td>32,984</td>
<td>49.852</td>
<td>1,511.40</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>75,142</strong></td>
<td><strong>66.099</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
## MAJOR DESTINATIONS OF COCO SHELL CHARCOAL EXPORTS
(Average 2009-2013)

<table>
<thead>
<tr>
<th>Destinations</th>
<th>Volume (MT)</th>
<th>Value (USD Million FOB)</th>
<th>Unit Price (USD/MT FOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>18,092</td>
<td>9.288</td>
<td>513.37</td>
</tr>
<tr>
<td>China</td>
<td>10,958</td>
<td>3.025</td>
<td>276.05</td>
</tr>
<tr>
<td>Korea</td>
<td>4,273</td>
<td>1.209</td>
<td>282.94</td>
</tr>
<tr>
<td>Others</td>
<td>8,374</td>
<td>2.629</td>
<td>313.95</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>41,697</strong></td>
<td><strong>16.151</strong></td>
<td><strong>387.34</strong></td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
### MAJOR DESTINATIONS OF ACTIVATED CARBON EXPORTS
(Average 2009-2013)

<table>
<thead>
<tr>
<th>Destinations</th>
<th>Volume (MT)</th>
<th>Value (USD Million FOB)</th>
<th>Unit Price (USD/MT FOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>7,214</td>
<td>11.174</td>
<td>1,548.83</td>
</tr>
<tr>
<td>Germany</td>
<td>3,821</td>
<td>7.118</td>
<td>1,862.94</td>
</tr>
<tr>
<td>USA</td>
<td>3,529</td>
<td>5.452</td>
<td>1,544.92</td>
</tr>
<tr>
<td>China</td>
<td>2,869</td>
<td>3.982</td>
<td>1,388.10</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2,806</td>
<td>4.484</td>
<td>1,597.86</td>
</tr>
<tr>
<td>Korea</td>
<td>2,172</td>
<td>2.593</td>
<td>1,194.01</td>
</tr>
<tr>
<td>Others</td>
<td>10,572</td>
<td>15.048</td>
<td>1,423.37</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32,984</td>
<td>49.852</td>
<td>1,511.40</td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
EXPORT VALUE OF COCONUT SHELL PRODUCTS (Average 2009-2013)

Source of basic data: Philippine Coconut Authority

USD 66,099,057

- Coco shell charcoal: 24.4%
- Coco shell powder: 0.1%
- Activated carbon: 75.4%
III. COCONUT WATER SECTION

FARMERS → PROCESSORS → MARKETERS → CONSUMERS

- Whole nuts
- Green nuts
- Mature nuts
- Coconut water drink

Domestic

Export
- USA
- Australia
- Netherlands
- Canada
## Major Destinations of Coconut Water Exports
(Average 2009-2013)

<table>
<thead>
<tr>
<th>Destinations</th>
<th>Volume (Million Liters)</th>
<th>Value (USD Million FOB)</th>
<th>Unit Price (USD/MT FOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>6.768</td>
<td>6.357</td>
<td>929.27</td>
</tr>
<tr>
<td>Australia</td>
<td>0.505</td>
<td>0.532</td>
<td>1,053.47</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.428</td>
<td>0.429</td>
<td>1,002.34</td>
</tr>
<tr>
<td>Canada</td>
<td>0.218</td>
<td>0.169</td>
<td>775.23</td>
</tr>
<tr>
<td>Others</td>
<td>1.608</td>
<td>1.901</td>
<td>1,182.21</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9.527</strong></td>
<td><strong>9.388</strong></td>
<td><strong>985.41</strong></td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
MAJOR DESTINATIONS OF COCONUT WATER EXPORTS
(Average 2009-2013)

- USA: 71.0%
- Canada: 2.3%
- Netherlands: 4.5%
- Australia: 5.3%
- Others: 16.9%

9,527,357 Liters

Source of basic data: Philippine Coconut Authority
IV-A. FRESH MEAT

Whole nuts

Husk nuts

FARMERS ➔ PROCESSORS ➔ MARKETERS ➔ CONSUMERS

- Desiccated coconut
- Virgin coconut oil
- Coconut milk powder
- Liquid coconut milk
- Coconut flour
- Nata de coco

Domestic

Export
- Europe
- USA
- Australia
- Japan
- Korea
## EXPORT OF FRESH MEAT PRODUCTS
(Average 2009-2013)

<table>
<thead>
<tr>
<th>Products</th>
<th>Volume (MT)</th>
<th>Value (USD Million FOB)</th>
<th>Unit Price (USD/MT FOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desiccated coconut</td>
<td>109,890</td>
<td>193.215</td>
<td>1,758.25</td>
</tr>
<tr>
<td>Fresh coconut</td>
<td>3,563</td>
<td>1.516</td>
<td>425.61</td>
</tr>
<tr>
<td>Nata de coco</td>
<td>5,376</td>
<td>5.410</td>
<td>1,004.78</td>
</tr>
<tr>
<td>Coconut milk powder</td>
<td>1,490</td>
<td>5.208</td>
<td>3,496.36</td>
</tr>
<tr>
<td>Liquid coconut milk</td>
<td>1,936</td>
<td>3.409</td>
<td>1,761.18</td>
</tr>
<tr>
<td>Coconut flour</td>
<td>921</td>
<td>1.683</td>
<td>1,828.43</td>
</tr>
<tr>
<td>Virgin coconut oil</td>
<td>4,503</td>
<td>17.816</td>
<td>3,956.37</td>
</tr>
<tr>
<td>Other food products</td>
<td>1,227</td>
<td>2.171</td>
<td>1,769.85</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>128,905</strong></td>
<td><strong>230.420</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
MAJOR DESTINATIONS OF DESICCATED COCONUT EXPORTS
(Average 2009-2013)

- **Europe**: 35.2%
- **USA**: 25.9%
- **Asia & Pacific**: 19.5%
- **Others**: 19.4%

Source of basic data: Philippine Coconut Authority

Total: 109,890 MT
MAJOR DESTINATIONS OF FRESH COCONUT EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

- China: 94.3%
- Others: 5.7%

3,563 MT
MAJOR DESTINATIONS OF NATA DE COCO EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority
MAJOR DESTINATIONS OF COCONUT MILK POWDER EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

1,490 MT
MAJOR DESTINATIONS OF LIQUID COCONUT MILK EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority
Major Destinations of Coconut Flour Exports (Average 2009-2013)

- USA: 21.9%
- Middle East: 14.7%
- Others: 19.5%
- Asia & Pacific: 43.9%

Total: 921 MT

Source of basic data: Philippine Coconut Authority
MAJOR DESTINATIONS OF VIRGIN COCONUT OIL EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

- USA: 45.5%
- Canada: 25.5%
- Europe: 15.7%
- Others: 13.3%

Total: 4,503 MT
IV. COCONUT MEAT SECTION

- Husked nuts
- Copra
- Coconut oil
- RB / RBD
- Oleochemicals / Biodiesel

FARMERS

PROCESSOR 1

PROCESSOR 2

PROCESSOR 3

PROCESSOR 4

MARKETERS

CONSUMERS

- Copra
- Coconut oil
- Copra meal
- RB/RBD oil
- Oleochemicals
- Biodiesel

Domestic

Export
- Korea
- Europe
- Malaysia
- Japan
- China
- USA
## EXPORT OF COPRA DERIVED PRODUCTS
(Average 2009-2013)

<table>
<thead>
<tr>
<th>Products</th>
<th>Volume (MT)</th>
<th>Value (USD Million FOB)</th>
<th>Unit Price (USD/MT FOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copra</td>
<td>278</td>
<td>0.286</td>
<td>1,028.84</td>
</tr>
<tr>
<td>Coconut oil</td>
<td>987,857</td>
<td>1,043.940</td>
<td>1,056.77</td>
</tr>
<tr>
<td>Copra meal</td>
<td>567,300</td>
<td>88.751</td>
<td>156.44</td>
</tr>
<tr>
<td>Oleochemicals</td>
<td>56,072</td>
<td>44.658</td>
<td>796.45</td>
</tr>
<tr>
<td>Acid oil</td>
<td>3,087</td>
<td>1.843</td>
<td>597.18</td>
</tr>
<tr>
<td>Various soaps, shampoo</td>
<td>5,803</td>
<td>3.048</td>
<td>2,669.80</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,620,398</strong></td>
<td><strong>1,194.973</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source of basic data: Philippine Coconut Authority
MAJOR DESTINATIONS OF COPRA EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority
MAJOR DESTINATIONS OF COCONUT OIL EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

USA 39.8%
Europe 43.6%
Asia & Pacific 15.6%
Others 0.9%

987,857 MT
MAJOR DESTINATIONS OF COPRA MEAL EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

Vietnam 29.7%
Korea 67.6%
Others 2.7%

567,300 MT
MAJOR DESTINATIONS OF OLEOCHEMICALS EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority
MAJOR DESTINATIONS OF ACID OIL EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

China 85.4%
Pakistan 11.1%
Others 3.5%

3,087 MT
MAJOR DESTINATIONS OF VARIOUS SOAPS AND SHAMPOO EXPORTS
(Average 2009-2013)

Source of basic data: Philippine Coconut Authority

Middle East: 11.2%
Asia & Pacific: 81.7%
Others: 3.9%
USA: 3.2%

5,803 MT
OUTLOOK

- Low coconut production in 2014; may bounce back with better planting materials
- Utilization of other parts of coconut taking off
  - Coconut water
  - Coir products
- New products gaining market attention
  - Virgin coconut oil
  - Coco sugar
  - Coco flour
  - Coco biodiesel
Everything said points to demand

Sustaining demand means

- Improving yields, more harvest
- Enhance nutrition, withstand diseases, pests
- Appropriate farm practices
- Better value for products, higher farm income
Some people may admonish others to leave coconut farming for some reasons like the vagaries of the weather affecting output as well as low prices at times. But one thing is certain, our people will always look up to coconut as a source of livelihood because it is by far the only crop which has never run out of market.
SALAMAT PO

YVONNE T. V. AGUSTIN
Executive Director
United Coconut Associations of the Philippines, Inc.
www.ucap.org.ph