

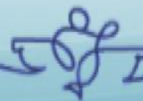


Food and Agriculture
Organization of the
United Nations

Matrix for the characterization of fishing activities

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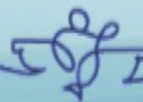
FAO and Small-Scale Fisheries

FAO has recently developed a **vision** for small-scale fisheries where:

- the contribution of small-scale fisheries to sustainable development is fully-realized;
- small-scale fishers and fish workers are not marginalized; and
- the importance of small-scale fisheries to national economies and food security is recognized, valued and enhanced.

Key issues

- To achieve this vision, a range of key issues must be addressed, supported by timely and accurate information on which to base decisions and action.
- These issues are grouped around five major themes:
- **people and communities**, focussing on livelihoods and key aspects of poverty alleviation;
- the **supply chain from catch to markets**, looking at opportunities and risks;
- **policy, legislation, governance and institutional arrangements**, emphasizing rights-based management approaches and increased integration of small-scale fisheries in decision-making;
- **small-scale fisheries worldwide**, spotlighting regional similarities and differences regarding their role, contribution, constraints and challenges;
- **learning and knowledge resources**, with a view for methodologies tailored to the small-scale fisheries environment.






Relevant publications and existing tools


Public Disclosure Authorized

66469

ECONOMIC AND SECTOR WORK




HIDDEN HARVEST
The Global Contribution
of Capture Fisheries



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Voluntary Guidelines for Securing
Sustainable Small-Scale Fisheries
in the Context of Food Security
and Poverty Eradication




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United Nations

FAO
FISHERIES AND
AQUACULTURE
PROCEEDINGS
2016-2017-005

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Improving our knowledge on
small-scale fisheries: data needs
and methodologies

Workshop proceedings
27–29 June 2017
FAO, Rome, Italy




Food and Agriculture
Organization of the
United Nations



Towards gender-equitable small-scale fisheries
governance and development

A handbook

In support of the implementation of the Voluntary Guidelines
for Securing Sustainable Small-Scale Fisheries
in the Context of Food Security and Poverty Eradication



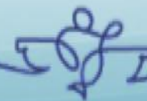
Why a matrix?

- There is increasing interest in trying to characterize small-scale and large-scale fisheries for a variety of reasons, spanning across **governance** (policy, legislation, access and tenure), **economic** (taxation, subsidies, special preference) and **management** (regulation, gears, zoning) considerations.
- In reality, there is no simple cut-off for defining a small-scale or large-scale fishing activity or operation.
- Characterizing the scale of fisheries is often both necessary and useful for informing **fisheries management, policies and governance**.

There is a need for methods that assess scale without imposing a narrow definition and that allow for a participatory characterization process.



Matrix approach



The Matrix

	0	1	2	3
Size of fishing vessel (or equivalent range for fixed gears)	<input type="checkbox"/> No vessel	<input type="checkbox"/> <12m, <10GT	<input type="checkbox"/> ≤24m, <50GT	<input type="checkbox"/> >24m, >50GT
Motorization	<input type="checkbox"/> no engine	<input type="checkbox"/> outboard engine/ inboard engine ≤100hp	<input type="checkbox"/> inboard engine <400hp	<input type="checkbox"/> inboard >400hp
Mechanization	<input type="checkbox"/> No mechanization	<input type="checkbox"/> Small power winch/hauler powered off engine	<input type="checkbox"/> Independently powered gear deployment/hauling	<input type="checkbox"/> Fully mechanized gear deployment & hauling
Fishing gear	<input type="checkbox"/> Labour intensive gear	<input type="checkbox"/> Passive gear	<input type="checkbox"/> Gear with aggregating devices	<input type="checkbox"/> Highly active gear
Refrigeration/Storage on board	<input type="checkbox"/> no storage	<input type="checkbox"/> ice box (i.e. on deck)	<input type="checkbox"/> ice hold (i.e. below deck)	<input type="checkbox"/> refrigerated hold
Labour/Crew	<input type="checkbox"/> Individual and/or family members	<input type="checkbox"/> Cooperative group	<input type="checkbox"/> ≤2 paid crew	<input type="checkbox"/> >2 paid crew
Fishing Unit/Ownership	<input type="checkbox"/> Owner/operator	<input type="checkbox"/> Leased arrangement	<input type="checkbox"/> Owner	<input type="checkbox"/> Corporate business
Time commitment	<input type="checkbox"/> Occasional	<input type="checkbox"/> Full-time, but seasonal	<input type="checkbox"/> Part-time all year	<input type="checkbox"/> Full time
Daily trip/multiday	<input type="checkbox"/> <6 hours	<input type="checkbox"/> day trip (< 24 hours)	<input type="checkbox"/> <4 days	<input type="checkbox"/> > 4 days
Fishing grounds/zone/ distance from shore	<input type="checkbox"/> <100 metres from shoreline/baselines/ high-water mark	<input type="checkbox"/> <10 km from shoreline	<input type="checkbox"/> <20km	<input type="checkbox"/> >20km from shoreline/ baselines
Disposal of catch	<input type="checkbox"/> Household consumption/barter (exchange for payment in goods or services)	<input type="checkbox"/> Local direct sale (exchange for monetary payment)	<input type="checkbox"/> Sale to traders	<input type="checkbox"/> Onboard processing and/or delivery to processors
Utilization of catch, Value adding/ preservation	<input type="checkbox"/> For direct human consumption	<input type="checkbox"/> Chilled/ locally processed/ cured	<input type="checkbox"/> Frozen	<input type="checkbox"/> Frozen/chilled for factory processing (for human consumption or fishmeal)
Integration into economy and/or management system	<input type="checkbox"/> Informal not integrated (no fees)	<input type="checkbox"/> Integrated (registered, untaxed)	<input type="checkbox"/> Formal integrated (licensed, landing fees)	<input type="checkbox"/> Formal, integrated (licensed, taxed)



How the matrix works

The matrix provides users with a **tool** to describe a fishing unit across multiple dimensions or characteristics of scale.

The flexible nature of the matrix means that the **fishing unit** being assessed can either be an entire fishery/fleet, a part of it, or an individual vessel/ fisher, allowing it to be applied to **diverse** types of fishing activity around the world.

Once scores from all the categories are aggregated, an overall picture emerges that facilitates **differentiation** between larger- and smaller-scale fisheries. By looking at different scores for different fishing units, it is possible to determine if there is a **clear cut off** between distinctly small-scale fisheries and distinctly large-scale fisheries.

If applied correctly, the matrix should highlight those fisheries which may be on the edge of small-scale and large-scale (i.e. a small vessel with a high-powered engine and large-scale level of fishing effort), assigning them their **own category**.



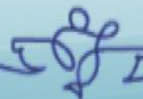
How the matrix works (cont.)

Please select ONE option per row*:

When assessing a fisher/gear/vessel group (rather than a single entity), select the option that most closely matches the majority of the group or of operations.

	0	1	2	3
Size of fishing vessel	<input type="checkbox"/> No vessel	<input type="checkbox"/> <12m, <10GT	<input checked="" type="checkbox"/> ≤24m, <50GT	<input type="checkbox"/> >24m, >50GT
Motorization	<input type="checkbox"/> no engine	<input checked="" type="checkbox"/> outboard engine/ inboard engine ≤100hp	<input type="checkbox"/> inboard engine <400hp	<input type="checkbox"/> inboard >400hp
Mechanization	<input checked="" type="checkbox"/> No mechanization	<input type="checkbox"/> Small power winch/hauler powered off engine	<input type="checkbox"/> Independently powered gear deployment/hauling	<input type="checkbox"/> Fully mechanized gear deployment & hauling
Fishing gear	<input type="checkbox"/> Labour intensive gear	<input checked="" type="checkbox"/> Passive gear	<input type="checkbox"/> Gear with aggregating devices	<input type="checkbox"/> Highly active gear
Refrigeration/Storage on board	<input type="checkbox"/> no storage	<input checked="" type="checkbox"/> ice box (i.e. on deck)	<input type="checkbox"/> ice hold (i.e. below deck)	<input type="checkbox"/> refrigerated hold
Labour/Crew	<input type="checkbox"/> Individual and/or family members	<input type="checkbox"/> Cooperative group	<input type="checkbox"/> ≤2 paid crew	<input checked="" type="checkbox"/> >2 paid crew

By incorporating multiple dimensions, the matrix approach seeks to avoid misleading or inappropriate characterizations of fisheries as small-scale or large-scale.



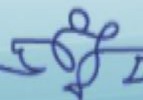
How the matrix works (cont.)

A given fishing unit may have characteristics typically associated with both smaller-scale and larger-scale fisheries, so many will receive lower scores in some categories and higher scores in others.

Daily trip/multiday	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<6 hours	day trip (< 24 hours)	<4 days	> 4 days
Fishing grounds/zone/ distance from shore	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<100 metres from shoreline/baselines/ high-water mark	<10 km from shoreline	<20km	>20km from shoreline/ baselines
Disposal of catch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Household consumption/barter (exchange for payment in goods or services)	Local direct sale (exchange for monetary payment)	Sale to traders	Onboard processing and/or delivery to processors
Utilization of catch, Value adding/ preservation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	For direct human consumption	Chilled/ locally processed/ cured	Frozen	Frozen/chilled for factory processing (for human consumption or fishmeal)
Integration into economy and/or management system	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Informal not integrated (no fees)	Integrated (registered, untaxed)	Formal integrated (licensed, landing fees)	Formal, integrated (licensed, taxed)
Total score: 21				

Applying the matrix generates an aggregate score for the given unit under assessment, with relevance for discussions of scale.

It is important to highlight that this characterization carries no value judgement of the nature of the fishing operation (no implication of a 'good or bad' activity).



How to apply the matrix

Step 1: Determine the fishing unit

To effectively use the matrix, users should score a fishing unit. This unit may be defined differently depending on local needs and available information. For example, the fishing unit may be:



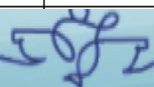
- An individual fisher or vessel
- A relatively homogenous group of fishing activity

Description of fishing unit assessed ³	
Name of fishing unit:	Small pelagic Fanti canoes
Number of vessels/fishers:	40 vessels
Target specie(s):	Grunts, sardines, barracuda
Location (country and province/county/district, etc.):	Liberia, Cape Mount and <u>Montserrado</u> Counties
Location of landing site:	West Point, Monrovia

Please select ONE option per row:

When assessing a fleet/fishery fishing unit (rather than a fisher/vessel fishing unit), select the option that most closely matches the majority of the group or majority activities.

	0	1	2	3
Size of fishing vessel	<input type="checkbox"/> No vessel	<input type="checkbox"/> <12m, <10GT	<input checked="" type="checkbox"/> ≤24m, <50GT	<input type="checkbox"/> >24m, >50GT
	<input type="checkbox"/> no engine	<input checked="" type="checkbox"/> outboard engine/ inboard engine ≤100hp	<input type="checkbox"/> inboard engine <400hp	<input type="checkbox"/> inboard >400hp
Mechanization	<input checked="" type="checkbox"/> No mechanization	<input type="checkbox"/> Small power winch/hauler powered off engine	<input type="checkbox"/> Independently powered gear deployment/hauling	<input type="checkbox"/> Fully mechanized gear deployment & hauling
	<input type="checkbox"/> Labour intensive gear	<input checked="" type="checkbox"/> Passive gear	<input type="checkbox"/> Gear with aggregating devices	<input type="checkbox"/> Highly active gear
Refrigeration/Storage on board	<input type="checkbox"/> no storage	<input checked="" type="checkbox"/> ice box (i.e. on deck)	<input type="checkbox"/> ice hold (i.e. below deck)	<input type="checkbox"/> refrigerated hold
	<input type="checkbox"/> Individual and/or family members	<input type="checkbox"/> Cooperative group	<input type="checkbox"/> ≤2 paid crew	<input checked="" type="checkbox"/> >2 paid crew





How to apply the matrix

Step 2: Assess each individual fishing unit through application of the matrix

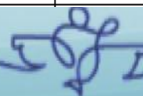
Description of fishing unit assessed ³	
Name of fishing unit:	Small pelagic Fanti canoes
Number of vessels/fishers:	40 vessels
Target specie(s):	Grunts, sardines, barracuda
Location (country and province/county/district, etc.):	Liberia, Cape Mount and <u>Montserrado</u> Counties
Location of landing site:	West Point, Monrovia

Please select ONE option per row:

When assessing a fleet/fishery fishing unit (rather than a fisher/vessel fishing unit), select the option that most closely matches the majority of the group or majority activities.

For each category (row) within the matrix, select the option which most closely describes the fishing unit, selecting only one option per category

	0	1	2	3
Size of fishing vessel	<input type="checkbox"/> No vessel	<input type="checkbox"/> <12m, <10GT	<input checked="" type="checkbox"/> ≤24m, <50GT	<input type="checkbox"/> >24m, >50GT
Motorization	<input type="checkbox"/> no engine	<input checked="" type="checkbox"/> outboard engine/ inboard engine ≤100hp	<input type="checkbox"/> inboard engine <400hp	<input type="checkbox"/> inboard >400hp
Mechanization	<input checked="" type="checkbox"/> No mechanization	<input type="checkbox"/> Small power winch/hauler powered off engine	<input type="checkbox"/> Independently powered gear deployment/hauling	<input type="checkbox"/> Fully mechanized gear deployment & hauling
Fishing gear	<input type="checkbox"/> Labour intensive gear	<input checked="" type="checkbox"/> Passive gear	<input type="checkbox"/> Gear with aggregating devices	<input type="checkbox"/> Highly active gear
Refrigeration/Storage on board	<input type="checkbox"/> no storage	<input checked="" type="checkbox"/> ice box (i.e. on deck)	<input type="checkbox"/> ice hold (i.e. below deck)	<input type="checkbox"/> refrigerated hold
Labour/Crew	<input type="checkbox"/> Individual and/or family members	<input type="checkbox"/> Cooperative group	<input type="checkbox"/> ≤2 paid crew	<input checked="" type="checkbox"/> >2 paid crew





How to apply the matrix

Step 3: Calculate the total assessment score

Assign a value from 0-3 for each response given according to the column heading.

	0	1	2	3
Size of fishing vessel	<input type="checkbox"/> No vessel	<input type="checkbox"/> <12m, <10GT	<input checked="" type="checkbox"/> ≤24m, <50GT	<input type="checkbox"/> >24m, >50GT
Motorization	<input type="checkbox"/> no engine	<input checked="" type="checkbox"/> outboard engine/ inboard engine ≤100hp	<input type="checkbox"/> inboard engine <400hp	<input type="checkbox"/> inboard >400hp
Mechanization	<input checked="" type="checkbox"/> No mechanization	<input type="checkbox"/> Small power winch/hauler powered off engine	<input type="checkbox"/> Independently powered gear deployment/hauling	<input type="checkbox"/> Fully mechanized gear deployment & hauling
Fishing gear	<input type="checkbox"/> Labour intensive gear	<input checked="" type="checkbox"/> Passive gear	<input type="checkbox"/> Gear with aggregating devices	<input type="checkbox"/> Highly active gear
Refrigeration/Storage on board	<input type="checkbox"/> no storage	<input checked="" type="checkbox"/> ice box (i.e. on deck)	<input type="checkbox"/> ice hold (i.e. below deck)	<input type="checkbox"/> refrigerated hold
Fishing grounds/zone/ distance from shore	<input type="checkbox"/> <100 metres from shoreline/baselines/ high-water mark	<input type="checkbox"/> <10 km from shoreline	<input checked="" type="checkbox"/> <20km	<input type="checkbox"/> >20km from shoreline/ baselines
Disposal of catch	<input type="checkbox"/> Household consumption/barter (exchange for payment in goods or services)	<input type="checkbox"/> Local direct sale (exchange for monetary payment)	<input checked="" type="checkbox"/> Sale to traders	<input type="checkbox"/> <u>Onboard processing</u> and/or delivery to processors
Utilization of catch, Value adding/ preservation	<input type="checkbox"/> For direct human consumption	<input checked="" type="checkbox"/> Chilled/ locally processed/ cured	<input type="checkbox"/> Frozen	<input type="checkbox"/> Frozen/chilled for factory processing (for human consumption or fishmeal)
Integration into economy and/or management system	<input type="checkbox"/> Informal not integrated (no fees)	<input type="checkbox"/> Integrated (registered, untaxed)	<input checked="" type="checkbox"/> Formal integrated (licensed, landing fees)	<input type="checkbox"/> Formal, integrated (licensed, taxed)
Total score: 21				

Calculate the total assessment score for each fishing unit by adding up all responses. The total assessment score should be between 0 and 39.



How to apply the matrix

Step 4: Compare results

Description of fishing unit assessed ³	
Name of fishing unit:	Small pelagic Fanti canoes
Number of vessels/fishers:	40 vessels
Target specie(s):	Grunts, sardines, barracuda
Location (country and province/county/district, etc.):	Liberia, Cape Mount and <u>Montserrado</u> Counties
Location of landing site:	West Point, Monrovia

Please select ONE option per row:

When assessing a fleet/fishery fishing unit (rather than a fisher/vessel fishing unit), select the option that most closely matches the majority of the group or majority activities.

	0	1	2	3
Size of fishing vessel	<input type="checkbox"/> No vessel	<input type="checkbox"/> <12m, <10GT	<input checked="" type="checkbox"/> ≤24m, <50GT	<input type="checkbox"/> >24m, >50GT
Motorization	<input type="checkbox"/> no engine	<input checked="" type="checkbox"/> outboard engine/ inboard engine ≤100hp	<input type="checkbox"/> inboard engine <400hp	<input type="checkbox"/> inboard >400hp
Mechanization	<input checked="" type="checkbox"/> No mechanization	<input type="checkbox"/> Small power winch/hauler powered off engine	<input type="checkbox"/> Independently powered gear deployment/hauling	<input type="checkbox"/> Fully mechanized gear deployment & hauling
Fishing gear	<input type="checkbox"/> Labour intensive gear	<input checked="" type="checkbox"/> Passive gear	<input type="checkbox"/> Gear with aggregating devices	<input type="checkbox"/> Highly active gear
Refrigeration/Storage on board	<input type="checkbox"/> no storage	<input checked="" type="checkbox"/> ice box (i.e. on deck)	<input type="checkbox"/> ice hold (i.e. below deck)	<input type="checkbox"/> refrigerated hold
Labour/Crew	<input type="checkbox"/> Individual and/or family members	<input type="checkbox"/> Cooperative group	<input type="checkbox"/> ≤2 paid crew	<input checked="" type="checkbox"/> >2 paid crew
Fishing grounds/zone/ distance from shore	<input type="checkbox"/> <100 metres from shoreline/baselines/ high-water mark	<input type="checkbox"/> <10 km from shoreline	<input checked="" type="checkbox"/> <20km	<input type="checkbox"/> >20km from shoreline/ baselines
Disposal of catch	<input type="checkbox"/> Household consumption/barter (exchange for payment in goods or services)	<input type="checkbox"/> Local direct sale (exchange for monetary payment)	<input checked="" type="checkbox"/> Sale to traders	<input type="checkbox"/> Onboard processing and/or delivery to processors
Utilization of catch, Value adding/ preservation	<input type="checkbox"/> For direct human consumption	<input checked="" type="checkbox"/> Chilled/ locally processed/ cured	<input type="checkbox"/> Frozen	<input type="checkbox"/> Frozen/chilled for factory processing (for human consumption or fishmeal)
Integration into economy and/or management system	<input type="checkbox"/> Informal not integrated (no fees)	<input type="checkbox"/> Integrated (registered, untaxed)	<input checked="" type="checkbox"/> Formal integrated (licensed, landing fees)	<input type="checkbox"/> Formal, integrated (licensed, taxed)

Total score:

21

Compare the total assessment score of each fishing unit assessed and determine if there is a clear cut-off between small-scale and large-scale fishing activity.

Description of fishing unit assessed ³	
Name of fishing unit:	<u>Kru</u> canoes
Number of vessels/fishers:	100 vessels
Target specie(s):	<u>Barracudas</u> , croakers, gruntern; crabs and lobsters
Location (country and province/county/district, etc.):	Liberia, Cape Mount and <u>Montserrado</u> Counties
Location of landing site:	West Point, Monrovia

Please select ONE option per row:

When assessing a fleet/fishery fishing unit (rather than a fisher/vessel fishing unit), select the option that most closely matches the majority of the group or majority activities.

	0	1	2	3
Size of fishing vessel	<input type="checkbox"/> No vessel	<input checked="" type="checkbox"/> <12m, <10GT	<input type="checkbox"/> ≤24m, <50GT	<input type="checkbox"/> >24m, >50GT
Motorization	<input checked="" type="checkbox"/> no engine	<input type="checkbox"/> outboard engine/ inboard engine ≤100hp	<input type="checkbox"/> inboard engine <400hp	<input type="checkbox"/> inboard >400hp
Mechanization	<input checked="" type="checkbox"/> No mechanization	<input type="checkbox"/> Small power winch/hauler powered off engine	<input type="checkbox"/> Independently powered gear deployment/hauling	<input type="checkbox"/> Fully mechanized gear deployment & hauling
Fishing gear	<input type="checkbox"/> Labour intensive gear	<input checked="" type="checkbox"/> Passive gear	<input type="checkbox"/> Gear with aggregating devices	<input type="checkbox"/> Highly active gear
Refrigeration/Storage on board	<input checked="" type="checkbox"/> no storage	<input type="checkbox"/> ice box (i.e. on deck)	<input type="checkbox"/> ice hold (i.e. below deck)	<input type="checkbox"/> refrigerated hold
Labour/Crew	<input checked="" type="checkbox"/> Individual and/or family members	<input type="checkbox"/> Cooperative group	<input type="checkbox"/> ≤2 paid crew	<input type="checkbox"/> >2 paid crew
Fishing grounds/zone/ distance from shore	<input type="checkbox"/> <100 metres from shoreline/baselines/ high-water mark	<input checked="" type="checkbox"/> <10 km from shoreline	<input type="checkbox"/> <20km	<input type="checkbox"/> >20km from shoreline/ baselines
Disposal of catch	<input type="checkbox"/> Household consumption/barter (exchange for payment in goods or services)	<input checked="" type="checkbox"/> Local direct sale (exchange for monetary payment)	<input type="checkbox"/> Sale to traders	<input type="checkbox"/> Onboard processing and/or delivery to processors
Utilization of catch, Value adding/ preservation	<input type="checkbox"/> For direct human consumption	<input checked="" type="checkbox"/> Chilled/ locally processed/ cured	<input type="checkbox"/> Frozen	<input type="checkbox"/> Frozen/chilled for factory processing (for human consumption or fishmeal)
Integration into economy and/or management system	<input type="checkbox"/> Informal not integrated (no fees)	<input type="checkbox"/> Integrated	<input checked="" type="checkbox"/> Formal integrated	<input type="checkbox"/> Formal, integrated (licensed, taxed)

Total score:

10

How to apply the matrix

Step 4: Compare results

Fanti canoes

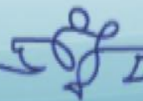


Total score:
21

Kru canoes



Total score:
10





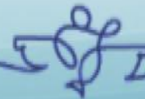
What the matrix is, and what it is not

The matrix **is** a tool which ...

- Describes fishing units across multiple dimensions related to scale
- Picks up on quantitative characteristics without a quantitative cutoff
- Provides flexibility within the scoring range by not standardizing the scoring categories
- Is designed to be inclusive enough to be applied to diverse fisheries throughout the world

The matrix **isn't** a tool which...

- Serves the purpose of a questionnaire, in particular not a research questionnaire
- Considers characteristics only pertinent to one type of fishery, but rather considers sliding features of small-scale to large-scale fishing operations around the globe
- Has pre-determined definitions and with fixed scoring categories
- Is designed to fit the fishing characteristics of one specific region/sub-region

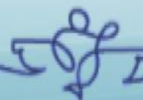




Further testing of the matrix

The matrix is currently in an early stage of testing and, as such, may require future adjustments pending initial results.

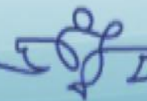
- After applying the matrix to a fishing unit, should the cut off between small-scale and large-scale fisheries be messy, the value in the scoring matrix may need some adjustment.
- In initial testing, should the matrix not pick up on those fisheries which fall somewhere between small and large-scale and assign them a distinct category, then certain characteristics may need to be tweaked.
- Further along, one may consider adding weighting to some of the characteristics in order to achieve more sensitive distinctions between categories.





In summary

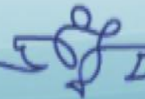
- There is no simple cut-off for defining a small-scale or large-scale fishing activity or operation.
- Characterizing the scale of fisheries is often both necessary and useful for informing fisheries management, policies and governance.
- The Matrix methodology could assess scale without imposing a narrow definition and that allow for a participatory characterization process.
- The matrix provides users with a tool to describe a fishing unit across multiple dimensions or characteristics of scale.
- It picks up on qualitative characteristics without a quantitative cutoff, but it should not be confused for a questionnaire.
- By incorporating multiple dimensions, the matrix approach seeks to avoid misleading or inappropriate characterizations of fisheries as small-scale or large-scale.
- The Matrix aims to determine a clear cut off between distinctly small-scale fisheries and distinctly large-scale fisheries.
- Further testing is needed to refine and improve the Matrix as an effective characterization tool.





Your thoughts and comments are essential for the development of
a useful tool!

Please help us improve the Matrix by providing your input to the
following sections.





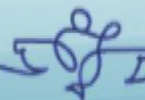
The assessment – Section 1

Description of fishing unit assessed³	
Name of fishing unit:	
Number of vessels/fishers:	
Target specie(s):	
Location (country and province/county/district, etc.):	
Location of landing site:	



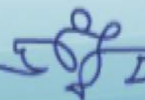
The assessment – Section 2

	0	1	2	3
Size of fishing vessel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No vessel	<12m, <10GT	≤24m, <50GT	>24m, >50GT
<i>Comments: Although vessel size isn't necessarily an indicator of fishing scale and intensity, it is an important characteristic when paired with variables such as motorization and mechanisation. The four categories give a range of sizes which cover the majority of vessels (including shore-based activities) which occur globally.</i>				
Motorization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	no engine	outboard engine/ inboard engine ≤100hp	inboard engine <400hp	inboard >400hp
<i>Comments: Indicates the presence of an engine on board, its horse power (hp) and whether it is outboard or inboard. In the case of multiple engines, consider the main one only.</i>				
Mechanization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No mechanization	Small power winch/hauler powered off engine	Independently powered gear deployment/hauling	Fully mechanized gear deployment & hauling
<i>Comments: Indicates what type of mechanisation, if any, is used to deploy gear during the fishing operation.</i>				
Fishing gear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Labour intensive gear	Passive gear	Gear with aggregating devices	Highly active gear
<i>Comments: Labour intensive gear includes mostly small gear handled manually by the fisher (e.g. hand hauled nets, pole and line, crab pots); Passive gears includes larger gear sets that are deployed passively (e.g. longlines, trap sets, gillnets/driftnets); gear with aggregating devices includes larger gear sets which use aggregating and attracting methods such as light attraction and FADs; Highly active gear include gears that require vessel power to encircle, chase, deploy and retrieve fish.</i>				
Refrigeration/Storage on board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	no storage	ice box (i.e. on deck)	ice hold (i.e. below deck)	refrigerated hold
<i>Comments: An ice box is a free-standing container filled with ice for the purpose of chilling fish (above or below deck); an ice hold is a structure below deck containing ice for the purpose of chilling fish; a refrigerated hold is part of boat structure and is mechanically refrigerated for the purpose of freezing fish.</i>				



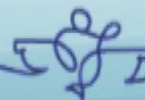
The assessment – Section 3

Labour/Crew	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Individual and/or family members	Cooperative group	≤2 paid crew	>2 paid crew
<i>Comments: The term cooperative group refers to any arrangement in which individuals, other than family members or paid crew, work together to carry out the fishing operation. The two paid crew categories refer to fishers paid either in monetary or non-monetary (e.g. part of the catch) terms.</i>				
Ownership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Owner/operator	Leased arrangement	Owner	Corporate business
<i>Comments: Owner/operator refers to a fisher who operates their own vessel/gear owned; Leased arrangement refers to fishers who operate from a rented vessel/rent gear; Owner refers to a respondent who owns the vessel/gear but does not carry out the fishing operations first hand; Corporate business refers to a company or group of people that carry out fishing activities as a single legal entity (usually own multiple vessels/gear and employ multiple crew).</i>				
Time commitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Occasional	Full-time, but seasonal	Part-time all year	Full time
<i>Comments: Occasional fishers receive under 30% of their livelihood from fishing or spend under 30% of their working time in that occupation; Part-time fishers receive at least 30% but less than 90% of their livelihood from fishing or spend at least 30% but less than 90% of their working time in that occupation. Full-time fishers receive at least 90% of their livelihood from fishing or spend at least 90% of their working time in that occupation. The Full-time but seasonal category refers to fishers who are occupied with other full time seasonal activities when not fishing (such as farming), or where the fishing "season" may be adapted so that it does not coincide with the peak tourist period from which earnings might well be higher.</i>				
Daily trip/multiday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<6 hours	day trip (< 24 hours)	<4 days	> 4 days
<i>Comments: Depending on the type of gear, this category could refer to a detailed unit of measure, i.e. hours fished; to "number of days fished", i.e., the number of days on which fishing took place (for those fisheries in which searching is a substantial part of the fishing operation, days in which searching but no fishing took place should be included); or to "number of days on ground", which in addition to days fishing and searching also includes all other days while the vessel was on the ground.</i>				



The assessment – Section 4

Fishing grounds/zone/ distance from shore	<input type="checkbox"/> <100 metres from shoreline/baselines/ high- water mark	<input type="checkbox"/> <10 km from shoreline	<input type="checkbox"/> <20km	<input type="checkbox"/> >20km from shoreline/ baselines
<i>Comments: Indicates at what distance from shore/baseline/high water mark the fishing activity is carried out.</i>				
Disposal of catch	<input type="checkbox"/> Household consumption/barter (exchange for payment in goods or services)	<input type="checkbox"/> Local direct sale (exchange for monetary payment)	<input type="checkbox"/> Sale to traders	<input type="checkbox"/> <u>Onboard</u> processing and/or delivery to processors
<i>Comments: Household consumption or barter applies to fisheries catch mainly consumed in the household or informally exchanged for goods or services. Local direct sale applies in the case of sales to individuals, restaurants or small local businesses, often close to landing sites. Sale to traders applies when one or multiple traders operate in the value chain between producer and consumer. On-board processing and/or delivery to processors applies when catch is processed for value-addition or preservation before being traded into the value chain.</i>				
Utilization of catch, Value adding/ preservation	<input type="checkbox"/> For direct human consumption	<input type="checkbox"/> Chilled/ locally processed/ cured	<input type="checkbox"/> Frozen	<input type="checkbox"/> Frozen/chilled for factory processing (for human consumption or fishmeal)
<i>Comments: Direct human consumption applies when fish is consumed fresh, with minimal to no processing. The other three categories indicate varying degrees of sophistication and durability of the preservation and value-adding methods. Chilled/locally processed/ cured includes smoking and salting.</i>				
Integration into economy and/or management system	<input type="checkbox"/> Informal not integrated (no fees)	<input type="checkbox"/> Integrated (registered, untaxed)	<input type="checkbox"/> Formal integrated (licensed, landing fees)	<input type="checkbox"/> Formal, integrated (licensed, taxed)
<i>Comments: This category provides a description of the level at which the fishing operation is integrated into formal economic and management systems. Informal/not integrated fishing operations lack any form of license or registration and are not subject to license or landing fees or taxation. Integrated fishing operations are formally registered however they are not taxed or charged a fee for their activities. Formal integrated operations are licensed and subject to license and/or landing fees, however they are not taxed as a commercial concern. Formal integrated fisheries are licensed and taxed as a commercial concern.</i>				





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謝謝
Merci
Thank You
Благодарю
¡Muchas Gracias!

