The Application of Performance Indicators

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What is he going to say?

Terms of Reference

How we met the Terms of Reference

Performance Indicator Navigator (PIN)

Good Practice before using the PIN

Good Practice after using the PIN

Demonstration of using the PIN

Terms of Reference

Application of Performance Indicators of the Road System

Strategies	Outputs
• **Investigate** the performance indicators which are actually implemented by Road Administrations and how these indicators are obtained and used	• Overview of **actually used Performance Indicators** • **Good Practices** to improve the transparency and efficiency of administration through the **application of performance indicators**

• Investigate policy evaluation based on performance indicators in accordance with a country's socio-economic development level
  • How indicators match daily needs
  • Means for data management
  • Assess the level of achievement
	• **Good practices** for **policy evaluation** and the **application of the results** for integration into new projects

Terms of Reference

Application of Performance Indicators of the Road System

More specifically:

Actions	Outputs
Development of a performance indicator framework and the population of this framework with actual performance indicators used by member countries	Good practice **framework** identifying the issues relevant for the **appropriate use** of performance indicators by Road Administrations
Identification of management approaches for effective use of performance indicators	Means for **selecting performance indicators, based on good practices** for the use of performance indicators – the **Performance Indicator Navigator**
Identification of performance indicators used by countries in different stages of development	Overviews of **actually used performance** indicators by category

The Challenge

How do you

identify and describe good practice

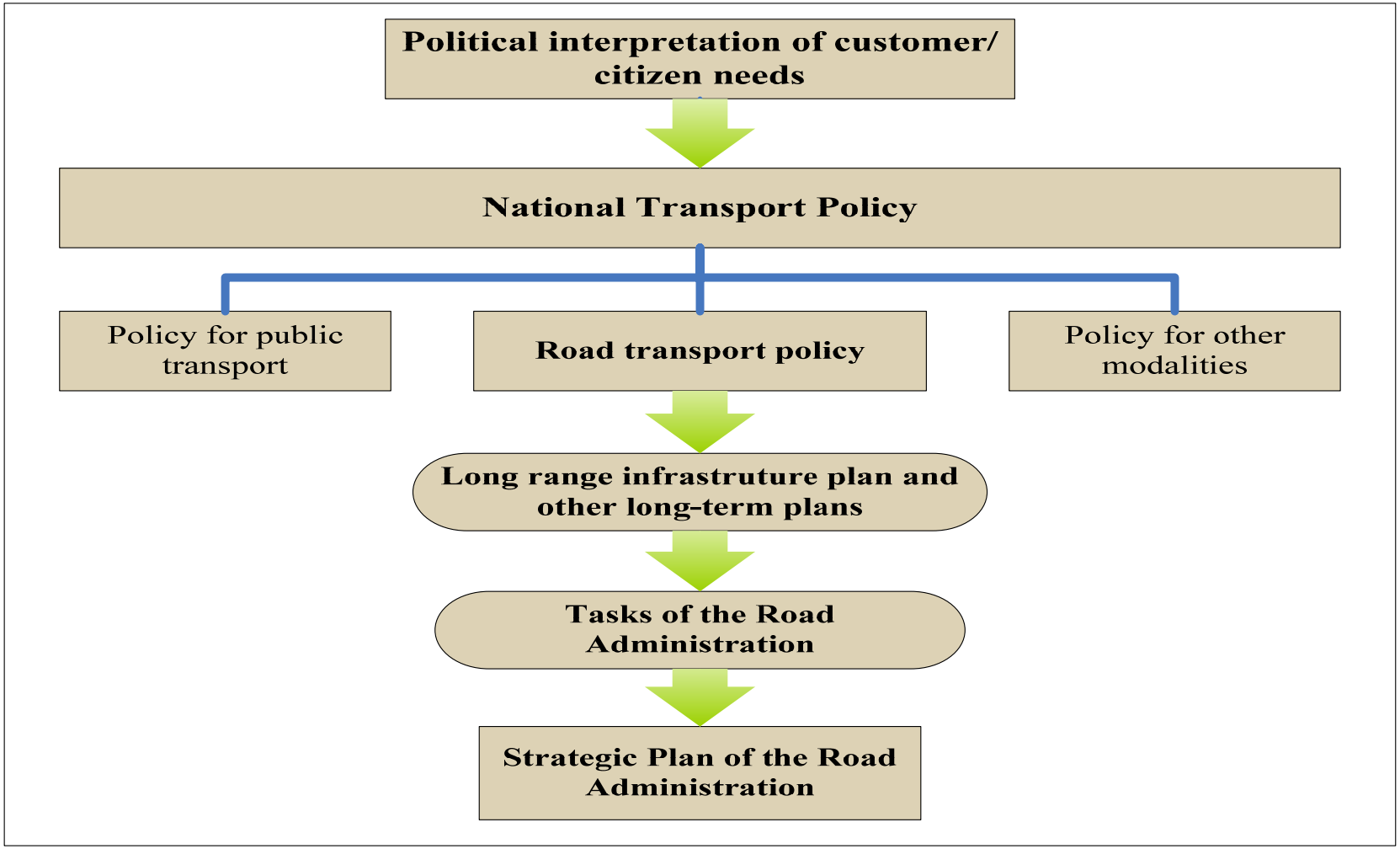
in the use of Performance Indicators

within an effective governance régime

for Roads Administrations?

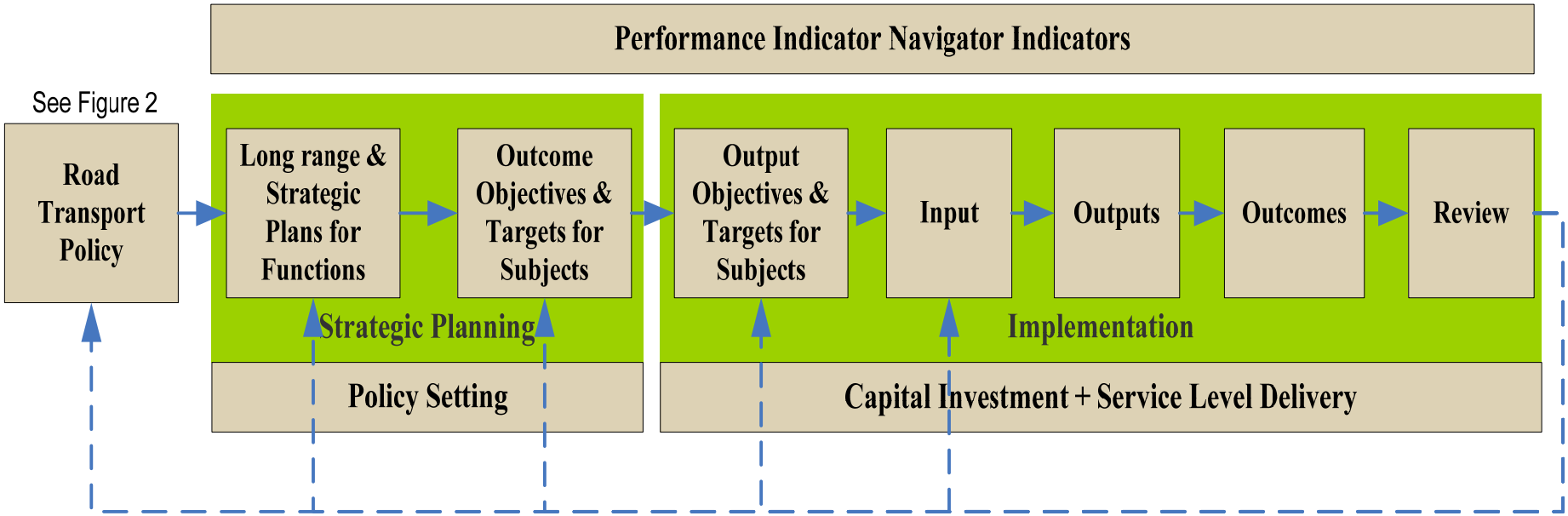
The How

1) Identify Good Governance



The How

1) Identified Good Governance



The Strategic Planning and Implementation Cycle

The How - continued

....then we

2) Found out how Administrations use Indicators (PIs)

3) Classified PIs in accordance with Good Governance

4) Then we developed a ……..

Performance Indicator Navigator

PIN

What is the Performance Indicator Navigator ?

The PIN is a downloadable software tool

Uses Performance Indicators already in use by RAs

Allows the user to apply the tests of good governance

The PIN will then automatically select PIs for the user

As with all software tools it comes with a Health Warning (See later)

So how does the PIN work?

The PIN - How does it work?

Starts with the full list of 172 Performance Indicators

Presents a series of questions and options to the user, which when answered eliminates Indicators that are not relevant.

Each question is based on good governance parameters identified by the Committee.

These are:

- Function of the Road Administration
- Phase of Activities
- Policy Subject Area
- Comparison with others

The PIN Health Warning

Not the complete answer on its own

Effective only if applied within a good governance régime

Classification of Indicators is widely drawn

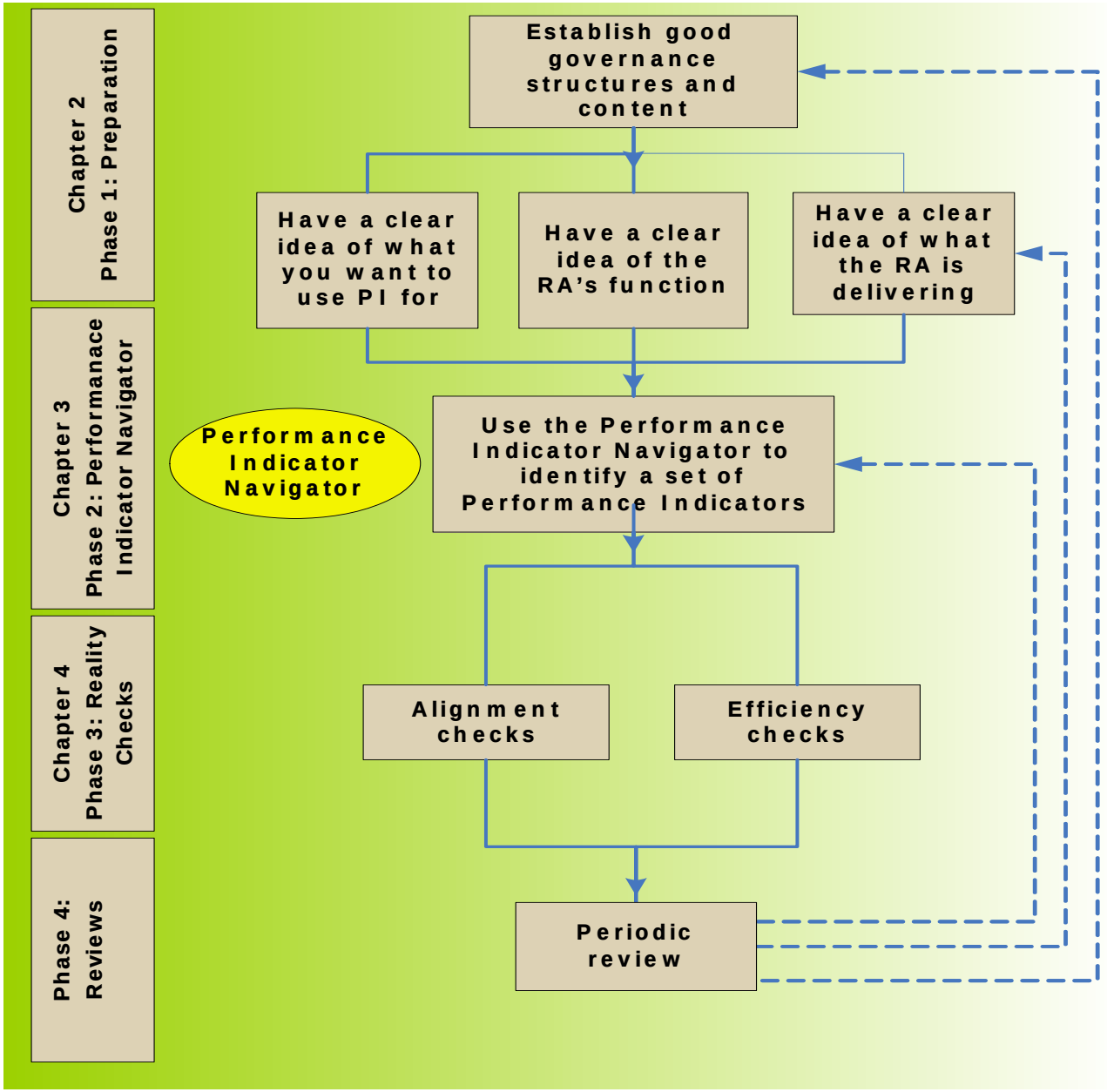
Must have a clear view of what you are delivering and how

Apply common sense reality checks after using the PIN

Contains actual indicators as described by the users

So where does the PIN fit in?

The Four Phases of Good Practice



Good Governance
Phase 1: Preparation

Be clear on the Road Administration's Functions and Deliverables

- Are you a Network Builder or Operator?
- Long-range Infrastructure Plans
- Strategic Plans for the Organisation
- What are the policy Drivers?
- Who are your stakeholders?

Be clear on what you want to use the Performance Indicators for

- Performance Monitoring or Management?
- Controllability

With these factors clear – you can use the PIN

Phase 2: Using the PIN (Questions)

Question 1: Select indicators by Function of the Road Administration.

- Enforcement (E)
- Policy and planning (P)
- Construction (C)
- Operations (Op)
- Maintenance (M)
- Licensing (L)
- Other, including RA efficiency (O)

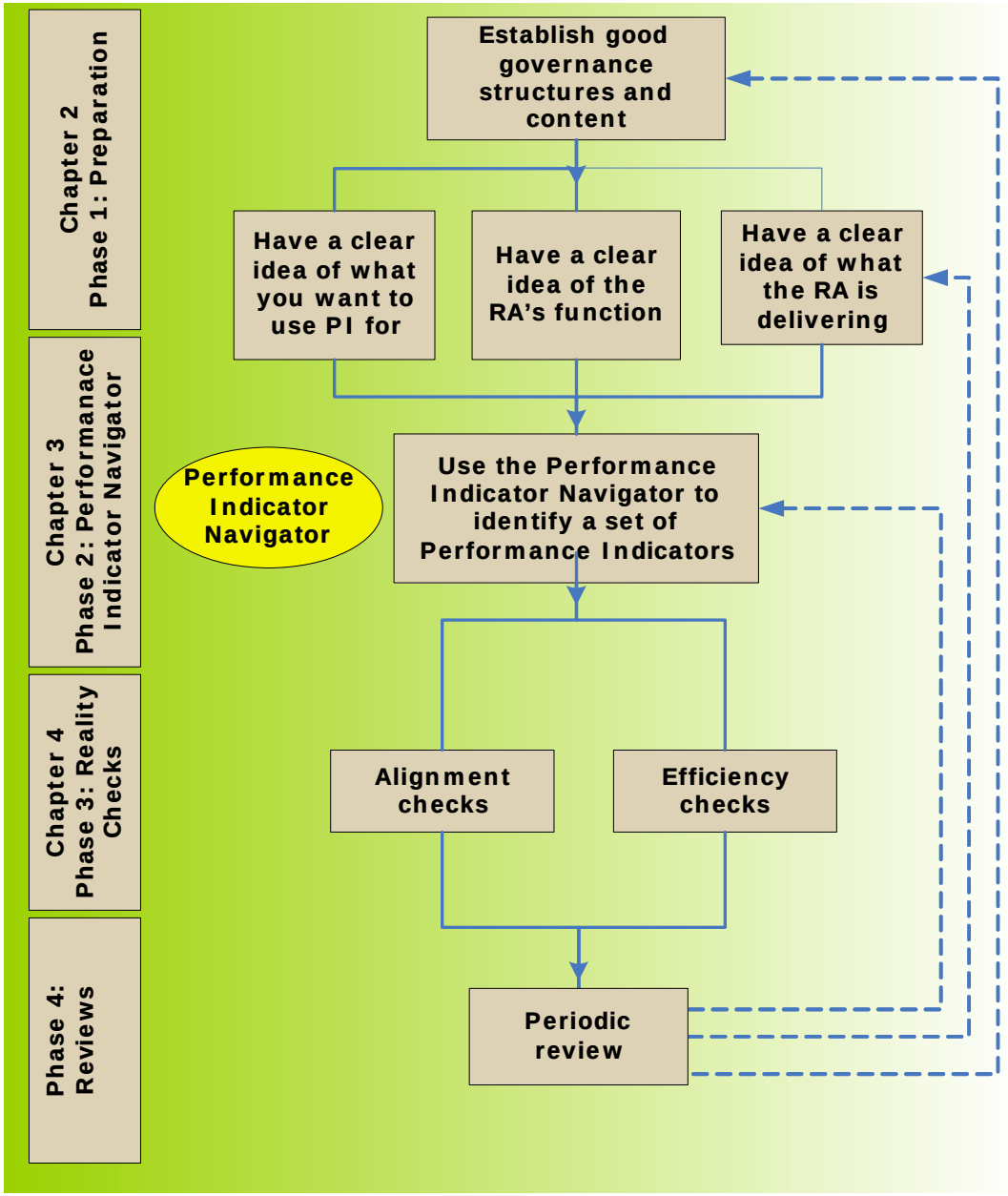
Question 2: Select indicators by Phase of activities.

- Strategic planning
- Implementation

Question 3: Select indicator by Subject.

- Social
- Health
- Environmental
- Economic
- Delivery

The Four Phases of Good Practice



Good Governance
Phase 3: Reality Checks

After using the PIN then carry out your:

Alignment Checks – are your Indicators

- ➔ Appropriate for the intended Phase of activity?
- ➔ Do they fit the degree of control you have over the activity?
- ➔ Suitable for monitoring or management as required?
- ➔ Going to really measure the objective intended?
- ➔ Relevant and understandable politically?
- ➔ Evenly distributed to avoid distorting behaviour?

Followed by……..

Good Governance
Phase 3: Reality Checks - cont'd

Efficiency Checks

- Is or can someone else measure it for you? (e.g.ONS)
- Do the Indicators add sufficient value?
- Can they be rationalised – proxy indicators?
- Can you discontinue pre-existing indicators?

At the end of which time you should have a usable set of PIs, however…….

Good Governance
Phase 4: Periodic review

Things change - Governments change

Political drivers alter during the life of a Government

- ➔ Strategic Planning leads to
- ➔ Programme delivery - Implementation

External drivers become more or less important

- ➔ Economic, Social and Environmental blend
- ➔ Network Maturity
- ➔ Investment Impulses

Periodic Review ensures continued relevance

- ➔ Ongoing review – every 2 years?
- ➔ Fundamental review every 4 years?

In Conclusion

Many PIs in use covering the 3 main functional areas of:

- Strategic Planning and Policy making
- Capital Investment (e.g. construction/upgrading)
- Service Level Delivery (e.g. maintenance and operations)

Performance measurement can inform all stakeholders

Accountability should = level of control

First understand the Functions and Deliverables:

- Policy drivers
- Long-range Infrastructure Plans
- Strategic Plan

Can then use the PIN to help select Performance Indicators

Alignment + efficiency checks must be made after the PIN

Periodic Review is necessary

End

PIN Demonstration

http://www.traffic-wales.com/resources

Worked Example

PIARC Performance Indicator Navigator

File Language

- ○ Function of Roads Administration
- ○ Phase of Activities
- ○ Purpose of Control
- ○ Subject of Performance Indicator
- ○ Sub-categories
- ○ Compare with other countries

Clear Selection

AIPCR VIA VITA PIARC

WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROUTE

"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 172

1, Pavement Remaining Service Life (RSL) - in years.
2, Paved roads (km/million people).
3, Growth in paved network (%).
4, Paved lane-km/million people.
5, Motorways (km/million people).
6, Motorized vehicles/thousand population.
7, Growth in motorized vehicle fleet (%).
8, Rigid trucks/thousand people.
9, Articulated trucks/thousand people.
10, Freight (tonne-km/million people).
11, Capital works benefit cost ratio.
12, Road assets (net and % annual increase).
13, Rough roads.
14, Total roads (km/millions people).
15, Growth in total road network (%).
16, Buses/thousand population.
17, Cars/thousand population.
18, Regional development budget (% of total).
19, Social outcomes budget (% of total).
20, Road Fatalities/ 100,000 population.
21, Road Fatalities/ 100,000 vehicles.

PIARC Performance Indicator Navigator

File Language

- Function of Roads Administration
- Phase
- Purpos
- Subje
- Sub-c
- Compare with other countries

NONE
Policy and Planning
Construction
Operational
Maintenance
Licensing
Enforcement
Other:Organisational Performance of RA

Do you want to select indicators by the function performed by the Roads Administration?

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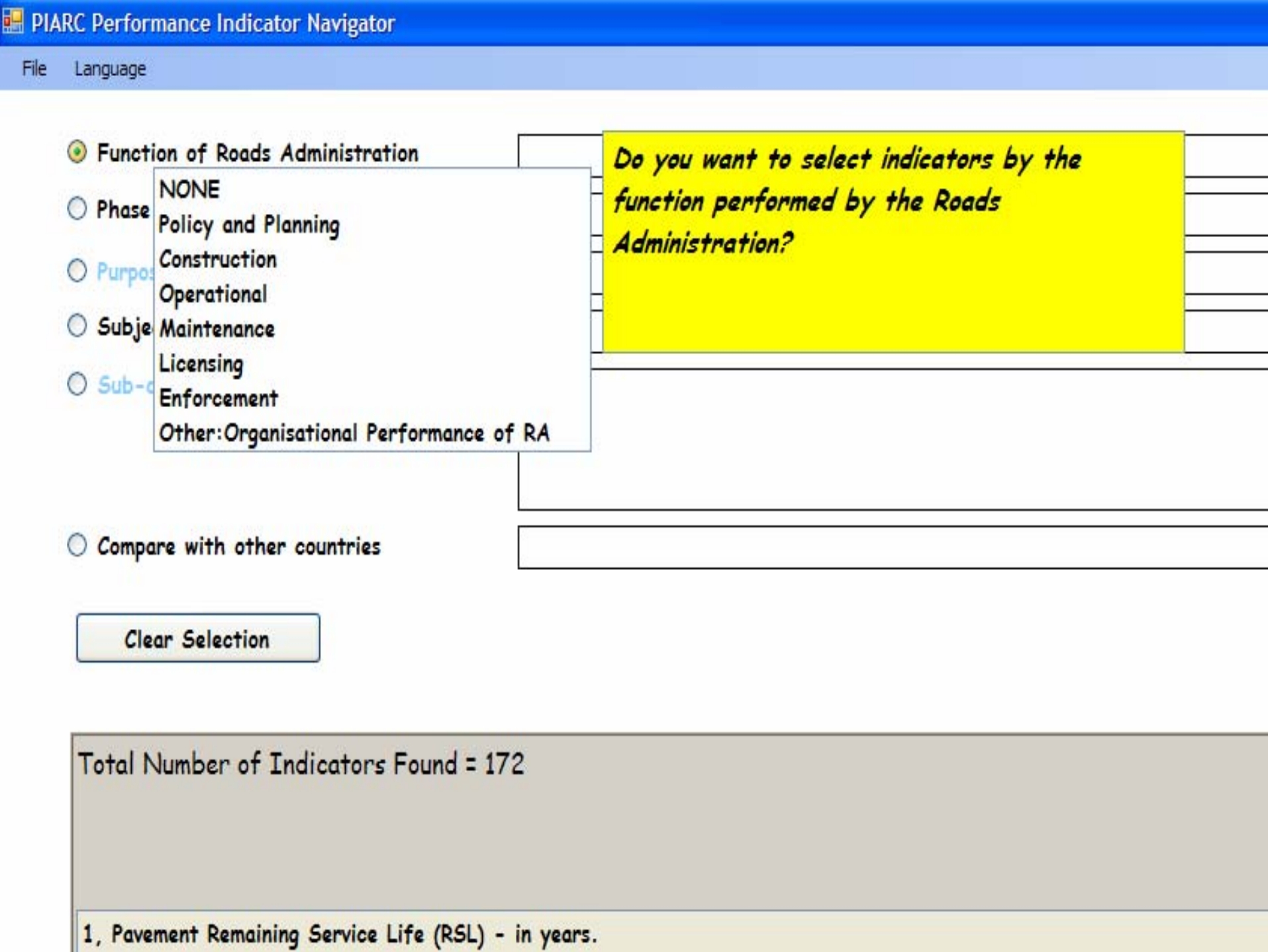
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5, Motorways (km/million people).
11, Capital works benefit cost ratio.
14, Total roads (km/millions people).
15, Growth in total road network (%).
28, Total Factor Productivity.
29, Road construction costs/ sq.m.
33, Annual works achievement index.
34, Annual delivery achievement index.
35, Delivery overhead (% of total works budget).
36, Capital works benefit cost ratio (average).
47, Safety works benefit cost ratio.
51, Return on Construction Expenditure (RCE). The weighted Internal Rate of Return of total capital construction expenditure per annum. IRR > 15%.
53, Expenditure Efficiency Index (EEI). The percentage of annual expenditure spent on overhead costs. ≤5%.
59, Urban road indicator.
61, Economic evaluation of road construction projects.
63, Hours of road work.
76, Rate of comprehensive cost reduction of road projects.
81, Passenger Transport Roading Infrastructures Cost ($M).

PIARC Performance Indicator Navigator

File Language

- Function of Roads Administration — Construction;
- Phase of Activities
- Purpose
- Subject of Performance Indicator
- Sub-categories
- Compare with other countries

Implementation (Outputs)
Strategic Planning (Outcomes)

For which Phase of activities will the indicators be used?

Clear Selection

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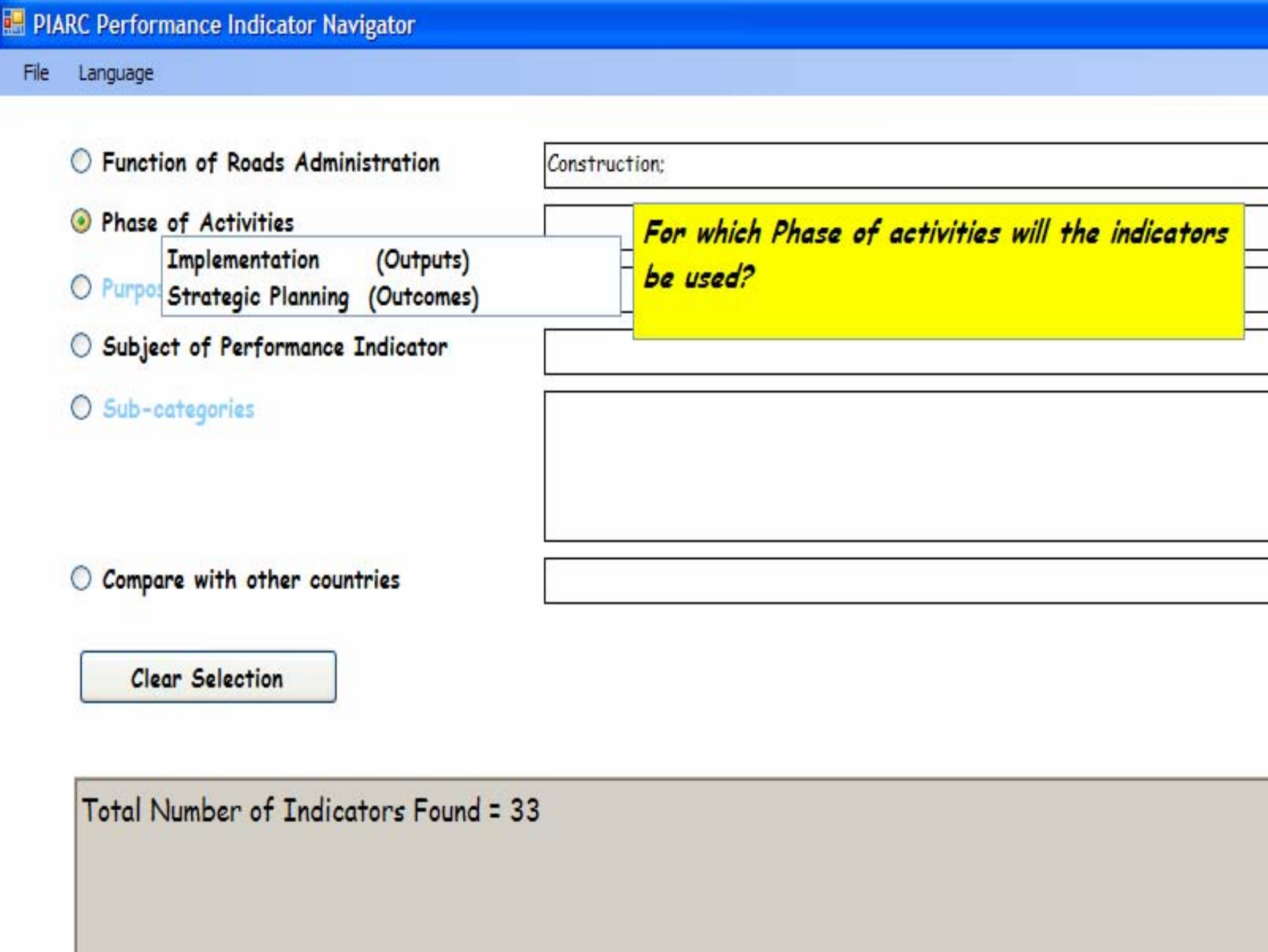
PIARC Performance Indicator Navigator
File
Language
Function of Roads Administration
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Phase of Activities
Implementation (Outputs)
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For which Phase of activities will the indicators be used?
Subject of Performance Indicator
Sub-categories
Compare with other countries
Clear Selection
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PIARC Performance Indicator Navigator

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- ○ Function of Roads Administration — Construction;
- ○ Phase of Activities — Implementation (Outputs);
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- ○ Subject of Performance Indicator
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- ○ Compare with other countries

Clear Selection

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WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROUTE
"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 25

11, Capital works benefit cost ratio.
28, Total Factor Productivity.
29, Road construction costs/ sq.m.
33, Annual works achievement index.
34, Annual delivery achievement index.
35, Delivery overhead (% of total works budget).
36, Capital works benefit cost ratio (average).
47, Safety works benefit cost ratio.
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63, Hours of road work.
76, Rate of comprehensive cost reduction of road projects.
81, Passenger Transport Roading Infrastructures Cost ($M).
82, Walking and Cycling Cost ($M).
87, Proportion of capital projects completed within expected cost and time parameters.
88, Variation between actual large projects commenced in the reporting year versus what was planned in each of the two previous years.
89, Actual project dollar benefits compared to forecast benefits.
92, Percentage forecast and actual annual dollar variance against state highway maintenance and improvement programme.
98, Number of 'saved' lives thanks to investment operations.

PIARC Performance Indicator Navigator

File Language

- Function of Roads Administration — Construction;
- Phase of Activities — Implementation (Outputs);
- Purpose of Control
- Subje
- Sub-c
- Compare with other countries

Expense and Policy
Capital Investment Project

If used for Implementation Phase do you wish to use the indicator for Control purposes and if so, then which?

Note: only available if Implementation Phase is chosen and for particular Roads Administration Functions.

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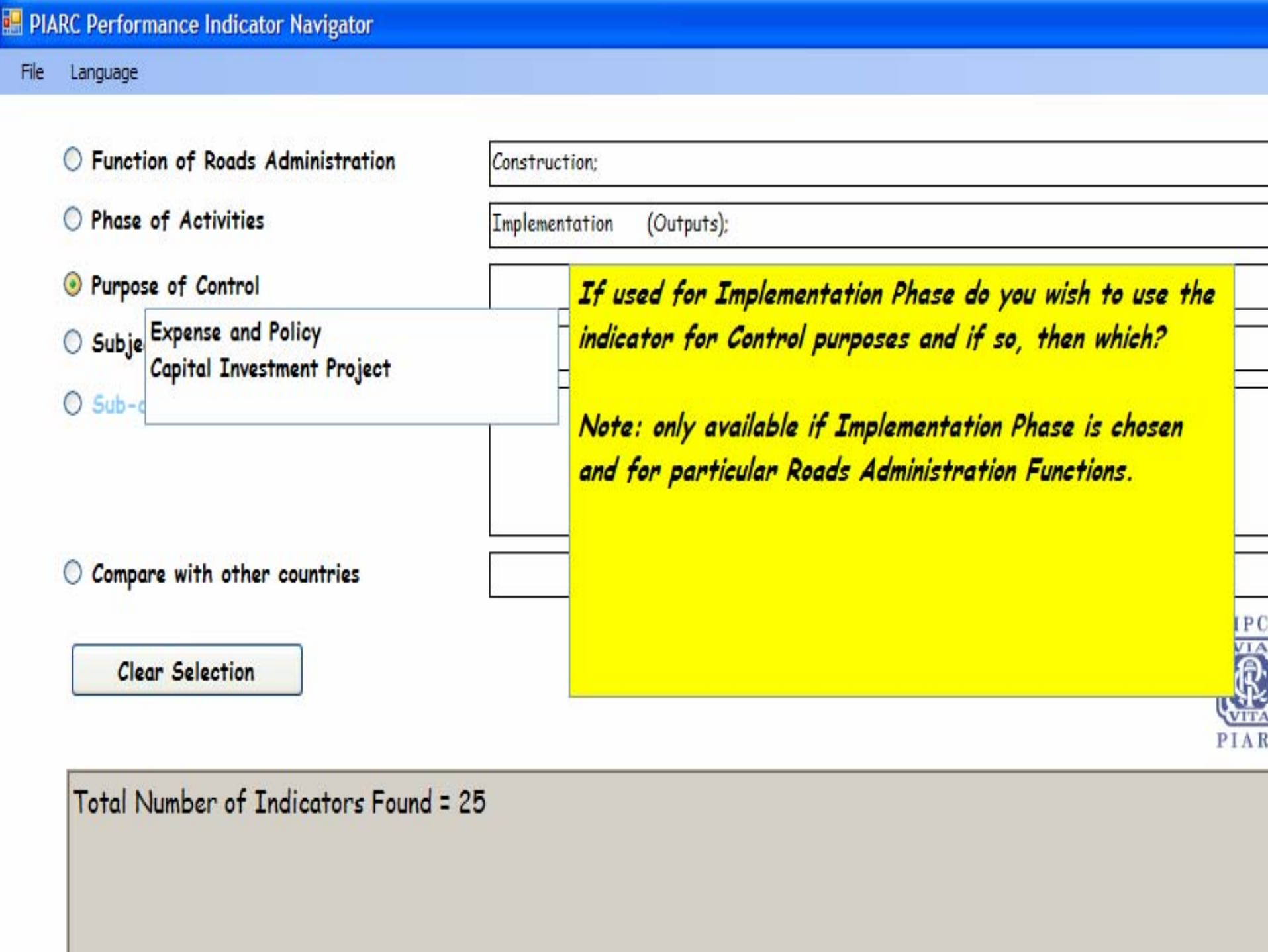
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PIARC Performance Indicator Navigator

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- Phase of Activities: Implementation (Outputs);
- Purpose of Control: Capital Investment Project;
- Subject of Performance Indicator:
- Sub-categories:
- Compare with other countries:

Clear Selection

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WORLD ROAD ASSOCIATION
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"Exchange knowledge and techniques on roads and road transportation."

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118, Total number of contracts.
126, Road Capital Investments / Total Road Expenditure.
163, Trunk road area constructed/strengthened (million square metres)

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PIARC Performance Indicator Navigator

File Language

- Function of Roads Administration
- Phase of Activities
- Purpose of Control
- Subject of Performance Indicator
- Sub-c
- Compo

NONE
Economic
Social
Health
Environmental
Delivery

Construction;

Implementation (Outputs);

Capital Investment Project;

Which policy Subject areas do you want the indicator to cover?

Clear Selection

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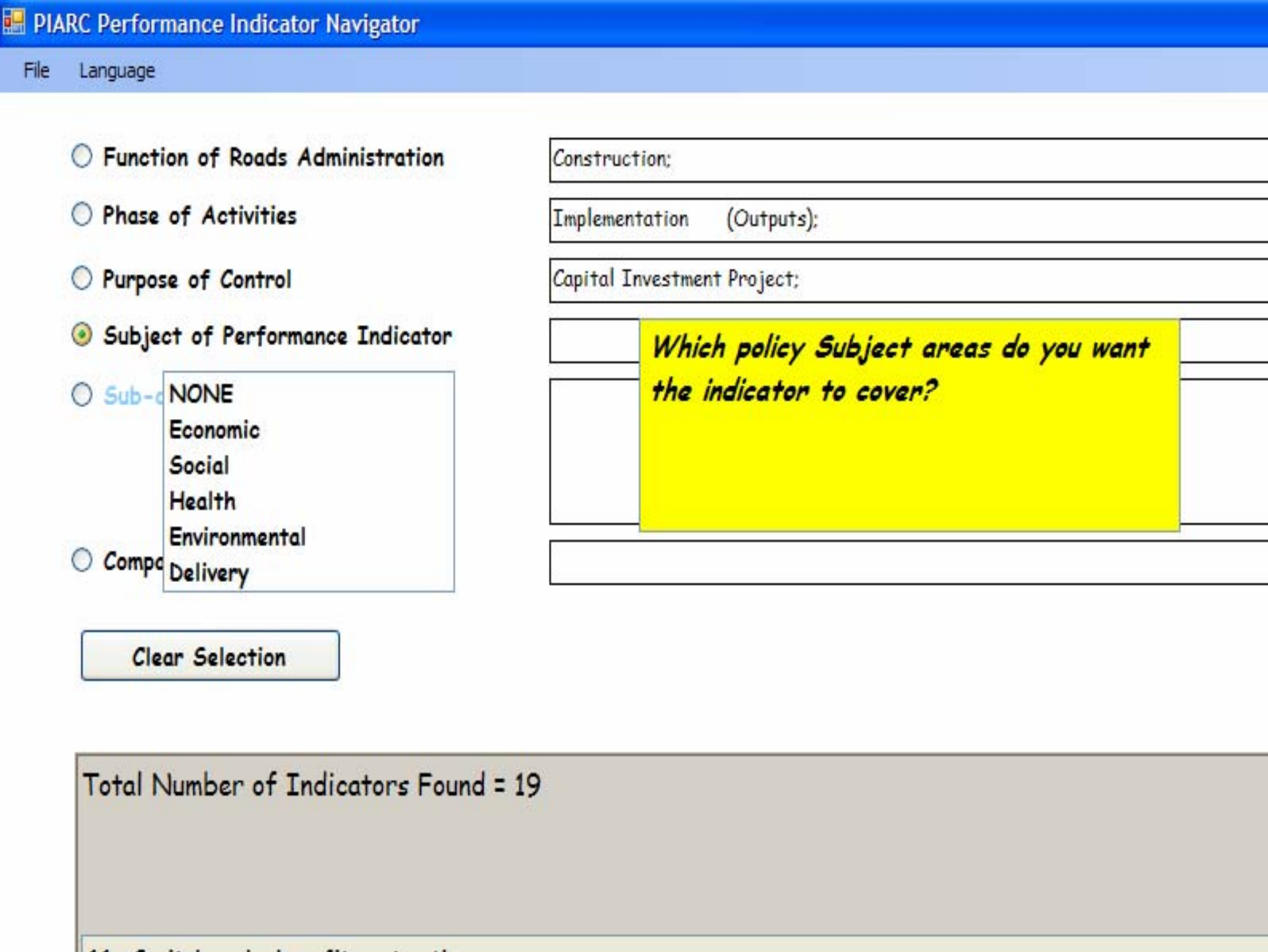
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Implementation (Outputs);
Capital Investment Project;
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PIARC Performance Indicator Navigator

File Language

- Function of Roads Administration: Construction;
- Phase of Activities: Implementation (Outputs);
- Purpose of Control: Capital Investment Project;
- Subject of Performance Indicator: Economic;
- Sub-categories:
- Compare with other countries:

Clear Selection

AIPCR PIARC

WORLD ROAD ASSOCIATION
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"Exchange knowledge and techniques on roads and road transportation."

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- Phase of Activities — Implementation (Outputs);
- Purpose of Control — Capital Investment Project;
- Subject of Performance Indicator — Economic;
- Sub-categories
- Compare with other countries

Clear Selection

Do you wish to narrow the selection of indicators further?

Note: only available if either Economic or Delivery Subject areas are chosen.

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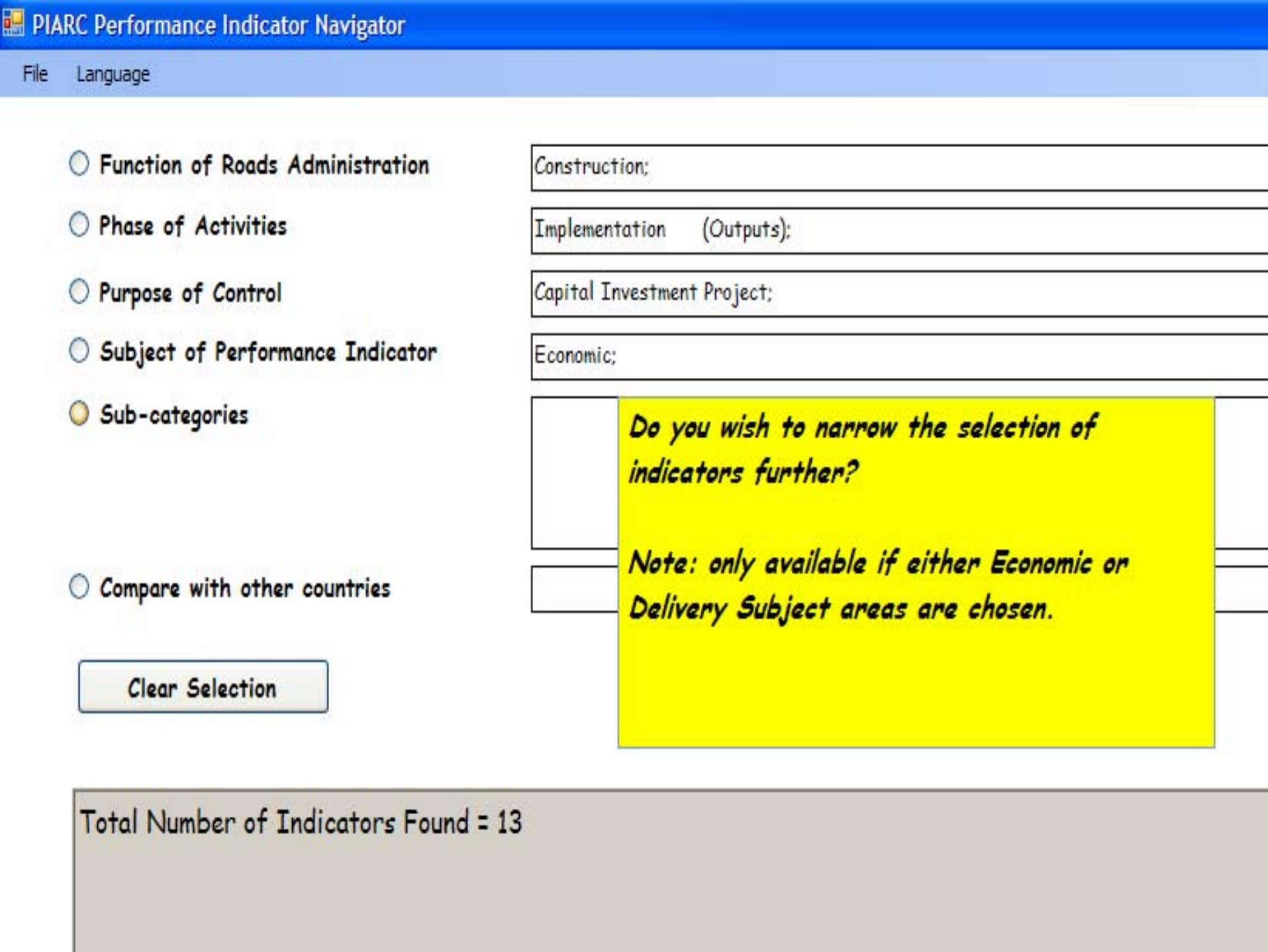
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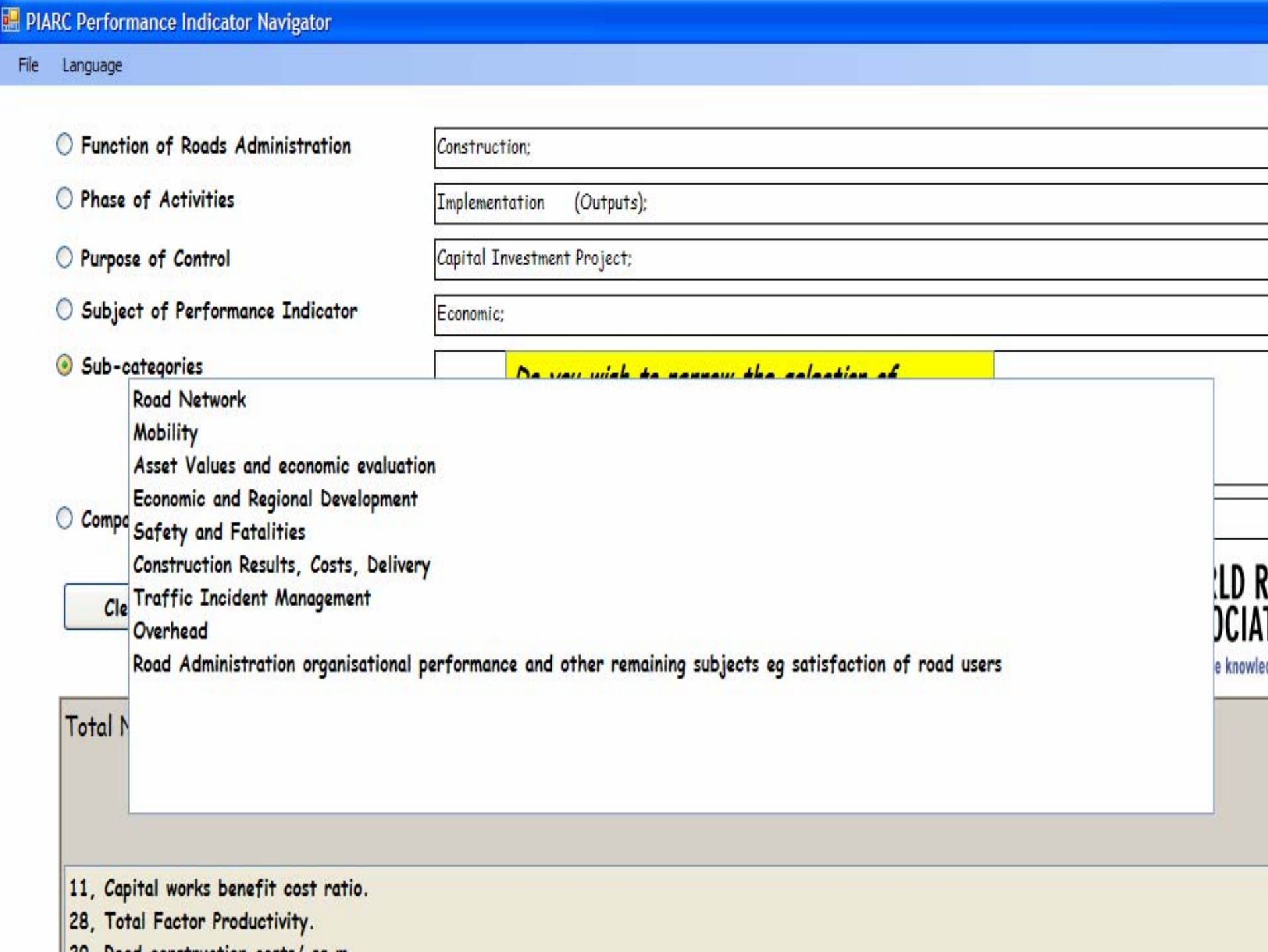
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Purpose of Control
Capital Investment Project;
Subject of Performance Indicator
Economic;
Sub-categories
Road Network
Mobility
Asset Values and economic evaluation
Economic and Regional Development
Safety and Fatalities
Construction Results, Costs, Delivery
Traffic Incident Management
Overhead
Road Administration organisational performance and other remaining subjects eg satisfaction of road users
11, Capital works benefit cost ratio.
28, Total Factor Productivity.

PIARC Performance Indicator Navigator

File Language

- Function of Roads Administration: Construction;
- Phase of Activities: Implementation (Outputs);
- Purpose of Control: Capital Investment Project;
- Subject of Performance Indicator: Economic;
- Sub-categories: Safety and Fatalities;
- Compare with other countries:

Clear Selection

AIPCR PIARC

WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROUTE
"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 3

47, Safety works benefit cost ratio.
61, Economic evaluation of road construction projects.
98, Number of 'saved' lives thanks to investment operations.

Compare with other countries

Clear Selection

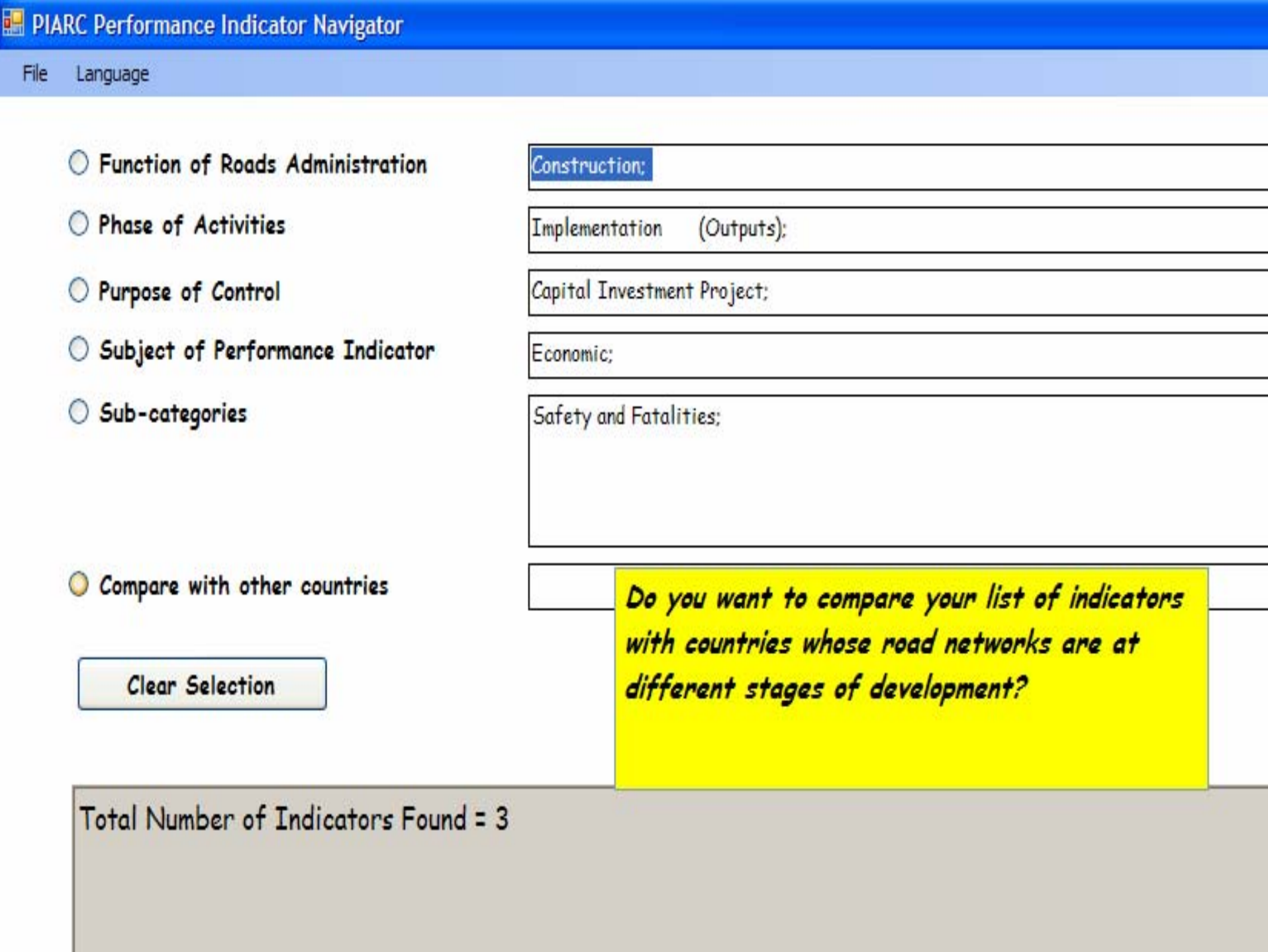
AIPCR PIARC

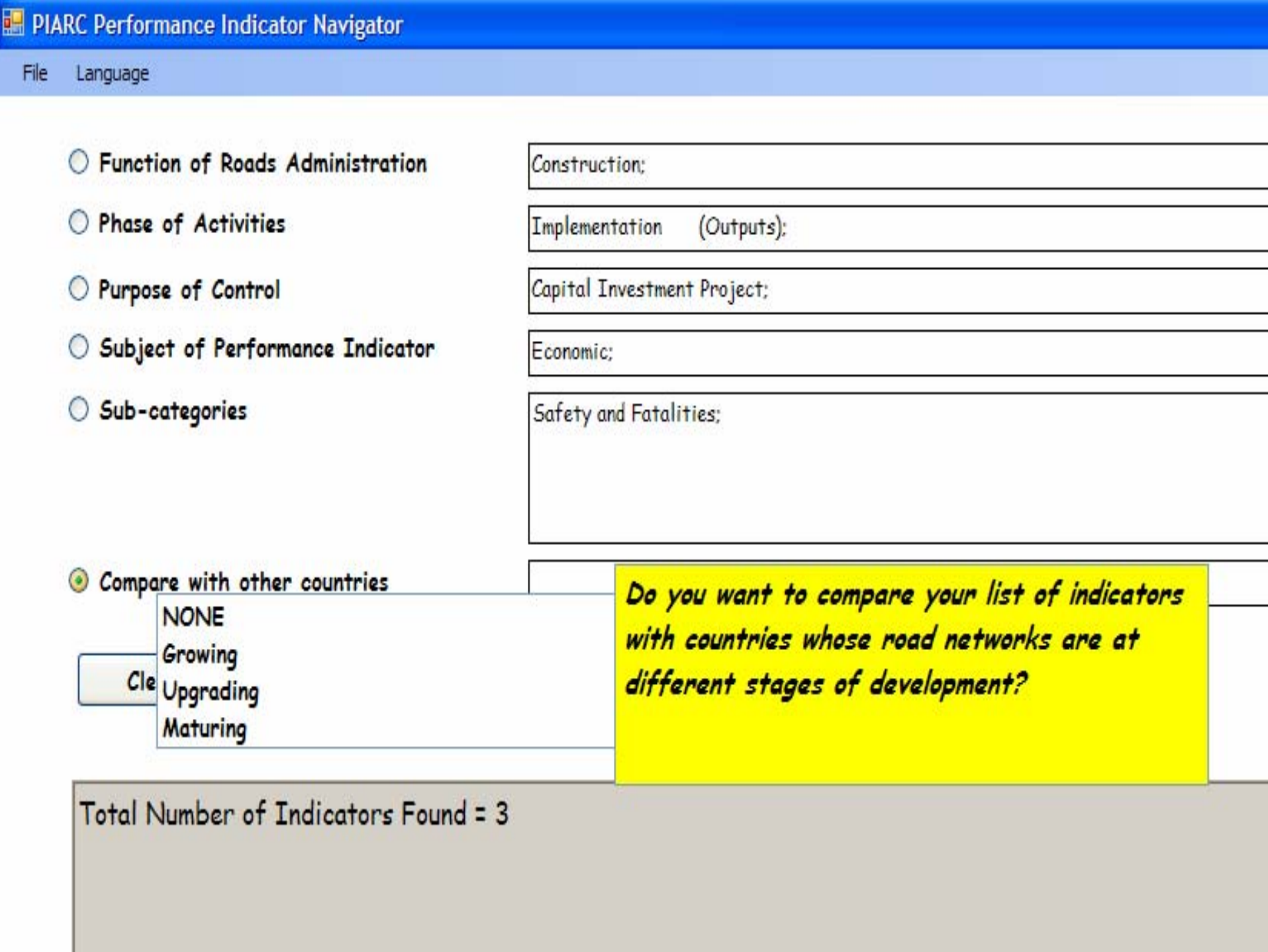
WORLD ROA
ASSOCIATIO

"Exchange knowledge

Total Number of Indicators Found = 3

47, Safety works benefit cost ratio.
61, Economic evaluation of road construction projects.
98, Number of 'saved' lives thanks to investment operations.


PIARC Performance Indicator Navigator
File
Language
Function of Roads Administration
Phase of Activities
Purpose of Control
Subject of Performance Indicator
Sub-categories
Compare with other countries
Construction;
Implementation (Outputs);
Capital Investment Project;
Economic;
Safety and Fatalities;
Clear Selection
Do you want to compare your list of indicators with countries whose road networks are at different stages of development?
Total Number of Indicators Found = 3


PIARC Performance Indicator Navigator
File
Language
Function of Roads Administration
Construction;
Phase of Activities
Implementation (Outputs);
Purpose of Control
Capital Investment Project;
Subject of Performance Indicator
Economic;
Sub-categories
Safety and Fatalities;
Compare with other countries
NONE
Growing
Upgrading
Maturing
Cle
Do you want to compare your list of indicators with countries whose road networks are at different stages of development?
Total Number of Indicators Found = 3

PIARC Performance Indicator Navigator

File Language

○ Function of Roads Administration	Construction;
○ Phase of Activities	Implementation (Outputs);
○ Purpose of Control	Capital Investment Project;
○ Subject of Performance Indicator	Economic;
○ Sub-categories	Safety and Fatalities;
○ Compare with other countries	Maturing;

Clear Selection

AIPCR PIARC

WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROUTE
"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 3

47, Safety works benefit cost ratio.
61, Economic evaluation of road construction projects.
98, Number of 'saved' lives thanks to investment operations.

PIARC Performance Indicator Navigator

File Language

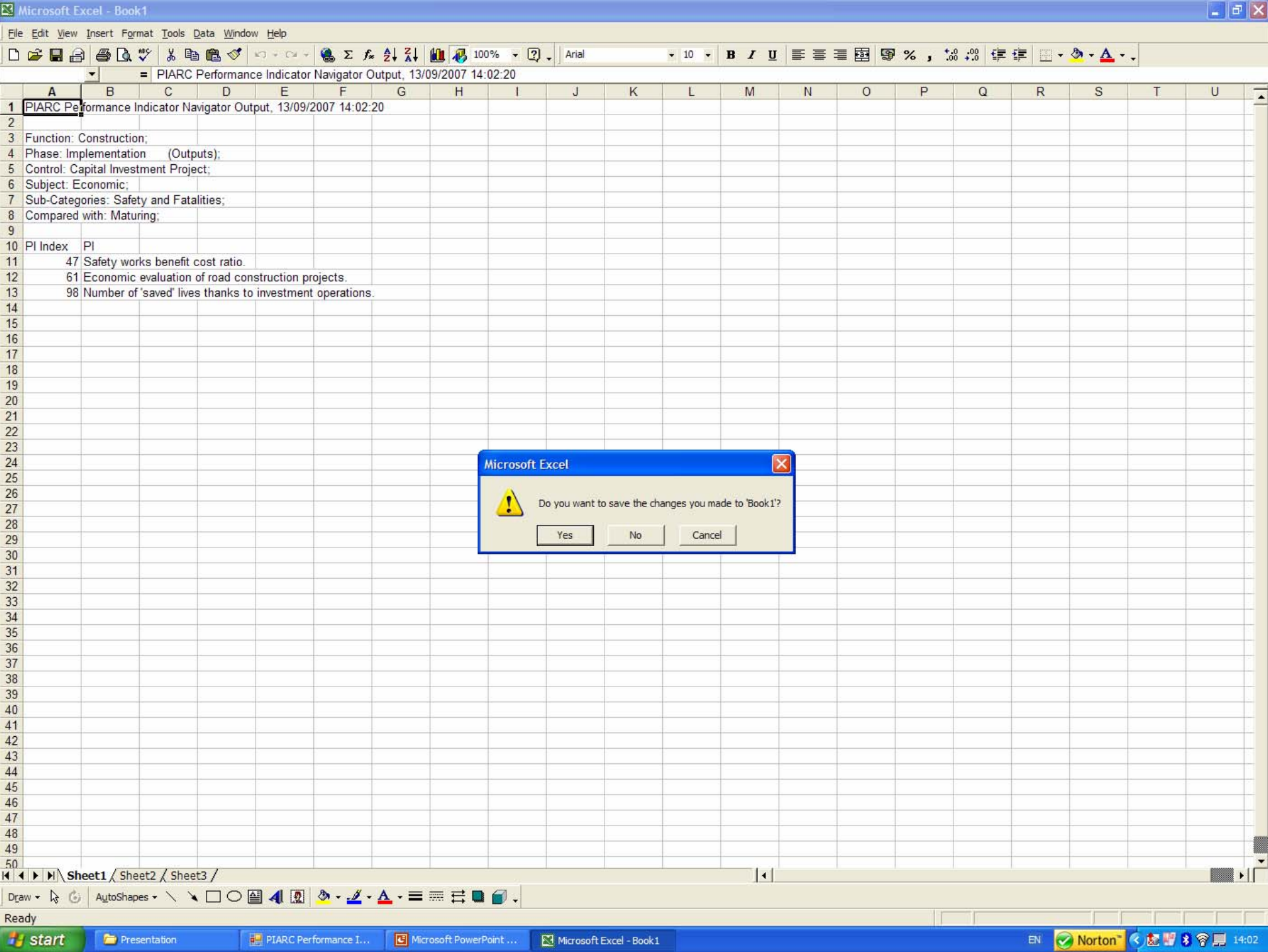
Function of Roads Administration	Construction;
Phase of Activities	Implementation (Outputs);
Purpose of Control	Capital Investment Project;
Subject of Performance Indicator	Economic;
Sub-categories	Safety and Fatalities;
Compare with other countries	Growing;

Clear Selection

AIPCR VIA VITA PIARC

WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROUTE
"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 0


Microsoft Excel - Book1
File Edit View Insert Format Tools Data Window Help
PIARC Performance Indicator Navigator Output, 13/09/2007 14:02:20
PIARC Performance Indicator Navigator Output, 13/09/2007 14:02:20
Function: Construction;
Phase: Implementation (Outputs);
Control: Capital Investment Project;
Subject: Economic;
Sub-Categories: Safety and Fatalities;
Compared with: Maturing;
PI Index PI
47 Safety works benefit cost ratio.
61 Economic evaluation of road construction projects.
98 Number of 'saved' lives thanks to investment operations.
Microsoft Excel
Do you want to save the changes you made to 'Book1'?
Yes
No
Cancel
Sheet1 Sheet2 Sheet3
Draw AutoShapes
Ready
start
Presentation
PIARC Performance I...
Microsoft PowerPoint ...
Microsoft Excel - Book1
EN
Norton
14:02

Scenario

Function: Operations

Phase: Implementation

Control Type: Service Level

Policy Class: Social

Clear Selection

ASSOCIATION MONDIALE DE LA RO

PIARC "Exchange knowledge and techniques on roads and road transportatio

Total Number of Indicators Found = 10

41, Satisfaction with road transport system (%).

56, Incident Management Systems (IMS). Modification of existing and development of new protocols for improvement of traffic operations and road safety. To improve response time to incidents, as well as the time it takes to stabilise road environment after occurrence of an incident. An overall reduction of incidents on our national road network. Establishing additional IMS on our national road network.

63, Hours of road work.

80, Number of accident blackspots that are still in existence 12 months after identification.

85, Performance of 0800 service against level-of-service requirements.

95, Road user and stakeholder satisfaction with the visual amenity of state highways.

100, Traffic flow - list of the roads having a damaged level of service.

114, Stakeholder satisfaction of Road Administration.

156, Percentage improvement of implementation of information system.

157, Number of online services integrated to the government's portal.

Scenario

Function: Operations

Phase: Implementation

Control Type: Service Level

Policy Class: Economic

Compare with other countries

Clear Selection

AIPCR PIARC

WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROUTE

"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 15

28, Total Factor Productivity.
42, Road accident costs.
49, Low Rut Exposure (LRE). The proportion of travel undertaken each year on roads with rut depth (surface depressions that can hold water and cause a vehicle to aquaplane), conditions less than the specified level. 95% of travel on less than 20mm rut depth.
50, Bridge Condition Exposure (BCE). The proportion of vehicles per year that travel over or under bridges with conditions higher than the specified level. 90% of travel over or under bridges with OCI higher than 80.
56, Incident Management Systems (IMS). Modification of existing and development of new protocols for improvement of traffic operations and road safety. To improve response time to incidents, as well as the time it takes to stabilise road environment after occurrence of an incident. An overall reduction of incidents on our national road network. Establishing additional IMS on our national road network.
57, Overload control. Introducing measures to curb pavement damage due to overloading. Partnering with provincial authorities in the establishment of additional TCCs on our national road network. Introducing the LAP Accreditation system to all industries (e.g. paper and pulp, steel, coal, etc.) over the next three years.
63, Hours of road work.
80, Number of accident blackspots that are still in existence 12 months after identification.
100, Traffic flow - list of the roads having a damaged level of service.
135, Number of days used for getting an overweight traffic permission/ Number of overweight traffic permission.
136, Percentage of total traffic accident due to road condition at year N minus Percentage of total traffic accident due to road condition at year N+1.
137, (Km of unpaved road in good condition/ Total km of unpaved roads)*100.
141, % good roads, % average roads, % bad roads (quality).
151, Percentage compliance of requirements for winter maintenance.
156, Percentage improvement of implementation of information system.

Scenario

Function: Maintenance

Phase: Strategic Planning

Control Type: None

Policy Class: Economic

Sub-category: Asset Value + Economic evaluation

Compare with other countries

Clear Selection

AIPCR VIA VITA PIARC

WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROU

"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 30

1, Pavement Remaining Service Life (RSL) - in years.
12, Road assets (net and % annual increase).
28, Total Factor Productivity.
49, Low Rut Exposure (LRE). The proportion of travel undertaken each year on roads with rut depth (surface depressions that can hold water and cause a vehicle to aquaplane), conditions less than the specified level. 95% of travel on less than 20mm rut depth.
54, Road Maintenance Effectiveness (RME). A cost index reflecting the proportion of the road network, which is being maintained to target conditions and the expenditure per kilometre required. Under development.
55, Asset Preservation Index (API). The ratio between expenditure and increase in pavement layer asset value. Under development.
60, Economic cost to achieve an optimal technical and economical condition for the existing road infrastructure.
76, Rate of comprehensive cost reduction of road projects.
90, Structural Maintenance per Unit cost ($/km)(also same measure for corridor maintenance).
91, Proportion of network maintained to level-of-service for road condition.
92, Percentage forecast and actual annual dollar variance against state highway maintenance and improvement programme.
97, Preservation level of road asset.
100, Traffic flow - list of the roads having a damaged level of service.
107, Percentage of deck area rated deficient.
112, Economic outcomes budget (% of total).
113, Percentage of trunk road network in acceptable trafficability class.
115, Total length of paved roads in not acceptable surface condition.
116, Total length of gravel roads in not acceptable condition.
117, Number of bridges in not acceptable condition.

Scenario

Function: Maintenance

Phase: Implementation

Control Type: Service Level Delivery

Policy Class: Economic

Sub-category: Asset Value + Economic evaluation

Clear Selection

Total Number of Indicators Found = 19

1, Pavement Remaining Service Life (RSL) - in years.
28, Total Factor Productivity.
30, Road maintenance costs/ sq.m.
49, Low Rut Exposure (LRE). The proportion of travel undertaken each year on roads with rut depth (surface depressions that can hold water and cause a vehicle to aquaplane), conditions less than the specified level. 95% of travel on less than 20mm rut depth.
54, Road Maintenance Effectiveness (RME). A cost index reflecting the proportion of the road network, which is being maintained to target conditions and the expenditure per kilometre required. Under development.
55, Asset Preservation Index (API). The ratio between expenditure and increase in pavement layer asset value. Under development.
90, Structural Maintenance per Unit cost ($/km)(also same measure for corridor maintenance).
91, Proportion of network maintained to level-of-service for road condition.
92, Percentage forecast and actual annual dollar variance against state highway maintenance and improvement programme.
100, Traffic flow - list of the roads having a damaged level of service.
107, Percentage of deck area rated deficient.
117, Number of bridges in not acceptable condition.
124, Status of road pavement (own quality system).
129, Number of bridges in sound condition.
137, (Km of unpaved road in good condition/ Total km of unpaved roads)*100.
141, % good roads, % average roads, % bad roads (quality).
142, maintenance costs / spare parts vehicles.
149, Percentage of AR network meeting the applicable International Roughness Index (IRI) thresholds (2 categories: strategic and other).
150, Percentage of structures on the AR network meeting the state of repair(?) and functionality criteria.

Scenario

Function: Maintenance

Phase: Implementation

Control Type: Service Level Delivery

Policy Class: Economic

Sub-category: Asset Value + Economic evaluation

Comparison: Growing Network

Compare with

Growing:

Clear Selection

AIPCR PIARC

WORLD ROAD ASSOCIATION
ASSOCIATION MONDIALE DE LA ROUT

"Exchange knowledge and techniques on roads and road transportation."

Total Number of Indicators Found = 10

1, Pavement Remaining Service Life (RSL) - in years.

30, Road maintenance costs/ sq.m.

49, Low Rut Exposure (LRE). The proportion of travel undertaken each year on roads with rut depth (surface depressions that can hold water and cause a vehicle to aquaplane), conditions less than the specified level. 95% of travel on less than 20mm rut depth.

54, Road Maintenance Effectiveness (RME). A cost index reflecting the proportion of the road network, which is being maintained to target conditions and the expenditure per kilometre required. Under development.

55, Asset Preservation Index (API). The ratio between expenditure and increase in pavement layer asset value. Under development.

117, Number of bridges in not acceptable condition.

129, Number of bridges in sound condition.

137, (Km of unpaved road in good condition/ Total km of unpaved roads)*100.

141, % good roads, % average roads, % bad roads (quality).

142, maintenance costs / spare parts vehicles.

Scenario

Function: Maintenance

Phase: Implementation

Control Type: Service Level Delivery

Policy Class: Economic

Sub-category: Asset Value + Economic evaluation

Comparison: Upgrading Network

Compare with

Upgrading:

Clear Selection

AIPCR VIA VITA PIARC

WORLD ROAD ASSOCIATION

"Exchange knowledge and

Total Number of Indicators Found = 4

1, Pavement Remaining Service Life (RSL) - in years.

28, Total Factor Productivity.

30, Road maintenance costs/ sq.m.

124, Status of road pavement (own quality system).

Scenario

Function: Maintenance

Phase: Implementation

Control Type: Service Level Delivery

Policy Class: Economic

Sub-category: Asset Value + Economic evaluation

Comparison: Maturing Network

Clear Selection

AIPCR VIA VITA PIARC

WORLD ROAD ASSOCIATION

"Exchange knowledge and te

Total Number of Indicators Found = 10

28, Total Factor Productivity.
30, Road maintenance costs/ sq.m.
90, Structural Maintenance per Unit cost ($/km)(also same measure for corridor maintenance).
91, Proportion of network maintained to level-of-service for road condition.
92, Percentage forecast and actual annual dollar variance against state highway maintenance and improvement programme.
100, Traffic flow - list of the roads having a damaged level of service.
107, Percentage of deck area rated deficient.
117, Number of bridges in not acceptable condition.
149, Percentage of AR network meeting the applicable International Roughness Index (IRI) thresholds (2 categories: strategic and other).
150, Percentage of structures on the AR network meeting the state of repair(?) and functionality criteria.

End