

Using systems thinking and ‘smart technology’ to facilitate social learning with communities

Russell Richards and Carl Smith

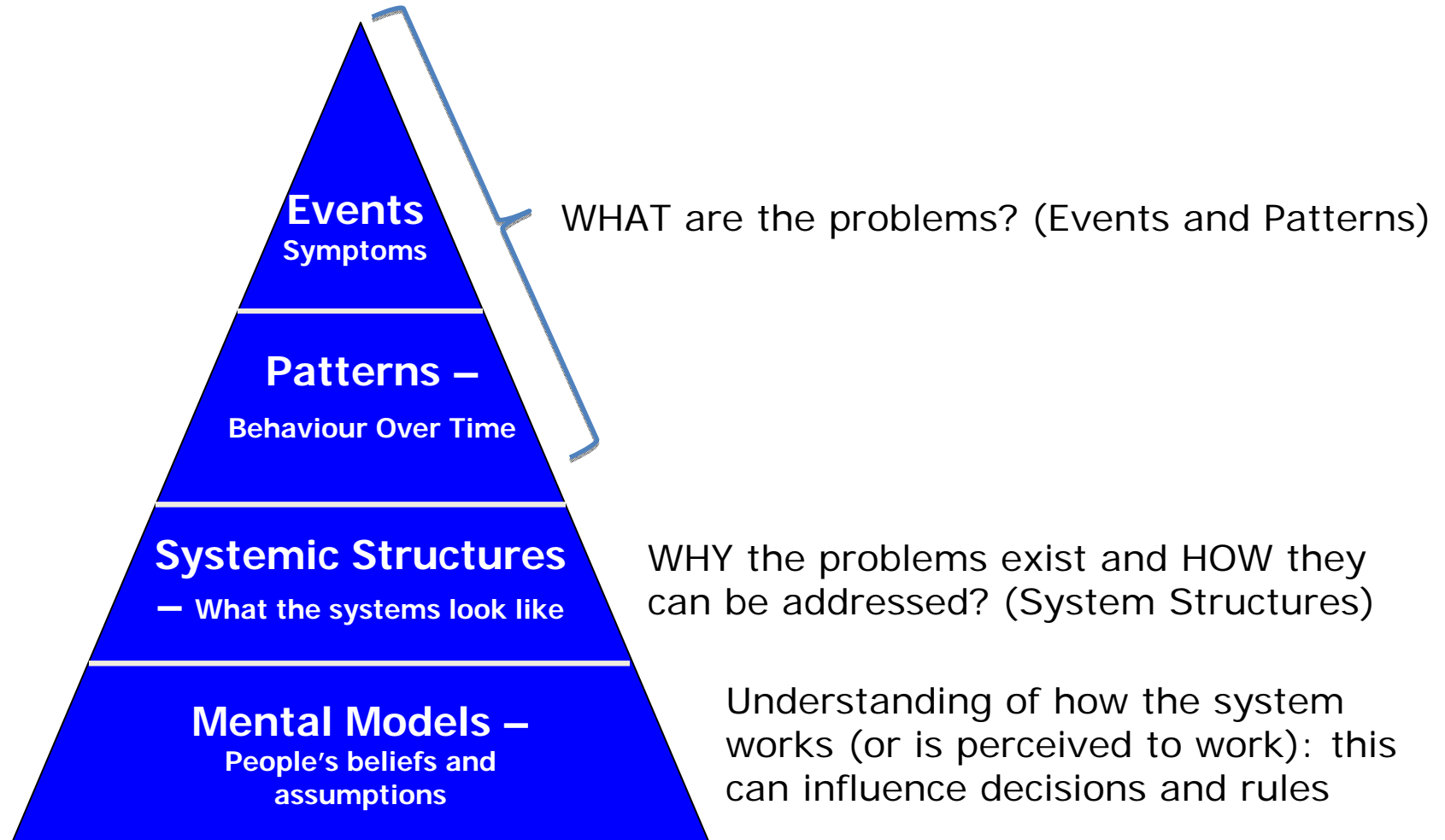
School of Agriculture and Sciences, The University of Queensland, Australia

CCRES – Component II: Generating robust local economies that capture and sustain marine ecosystem services



Four Levels of Systems Thinking

(Maani and Cavana, 2007, Chapter 2)



Socio-Ecological Problems

- Selayar (Indonesia) and El Nido (Philippines)
- Focus problems:
 - Water pollution
 - Food insecurity
 - Fish catch decline / habitat destruction
 - Mangrove clearing
- Problem mapping: Focus group discussions to elicit 'Rich Pictures'



A vibrant underwater scene featuring a diverse coral reef. In the foreground, there are large, porous, light-colored coral structures. To the left, there are smaller, more colorful coral formations in shades of orange and red. Various small fish are visible swimming in the clear blue water above the reef.

SESAMME app

SESAMME

Socio-ecological systems app
for mental model elicitation

 More information



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SESAMME

LOG IN

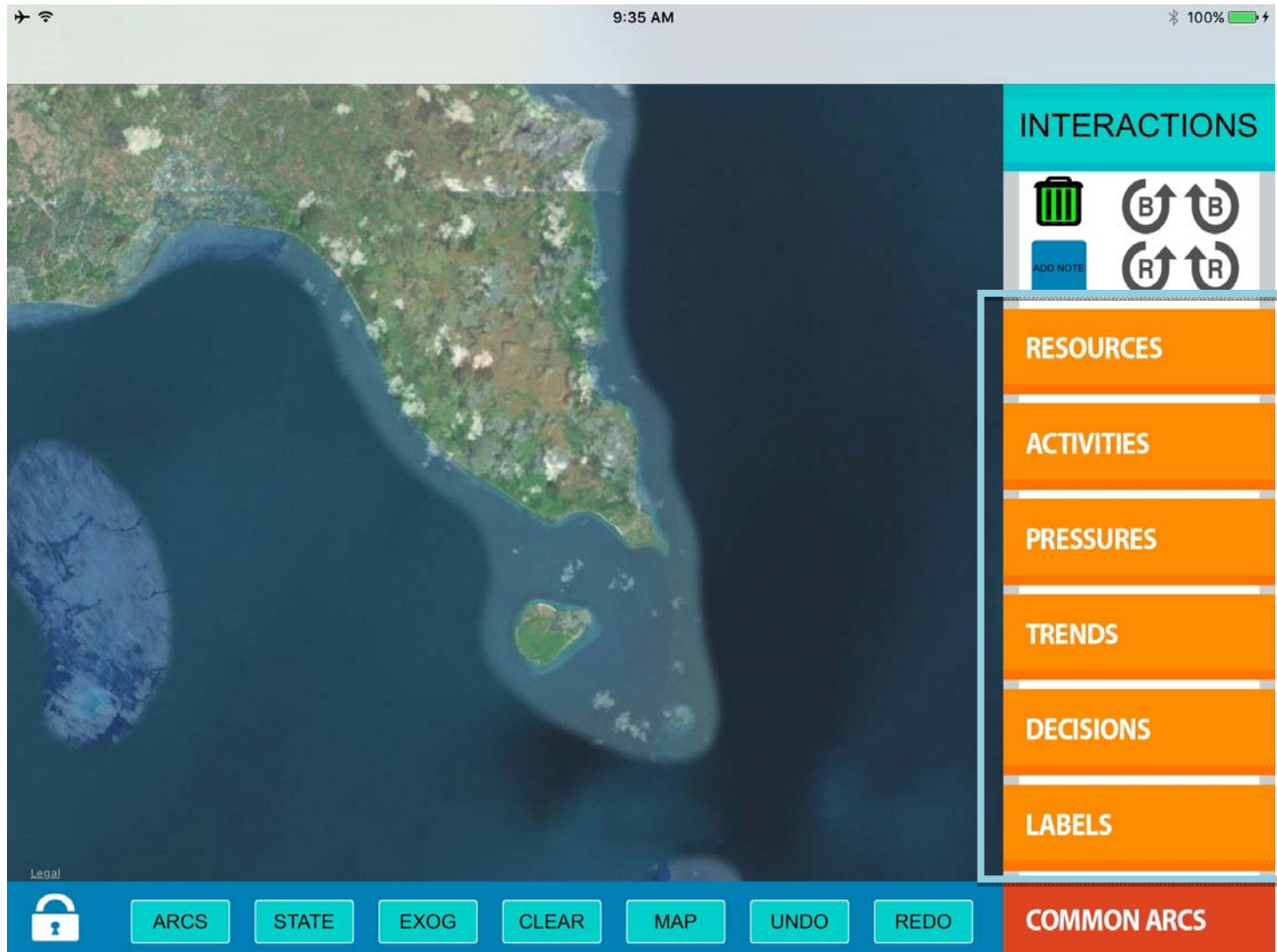
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Offline

Hot Start

SESAMME

Spatially explicit (Satellite view)

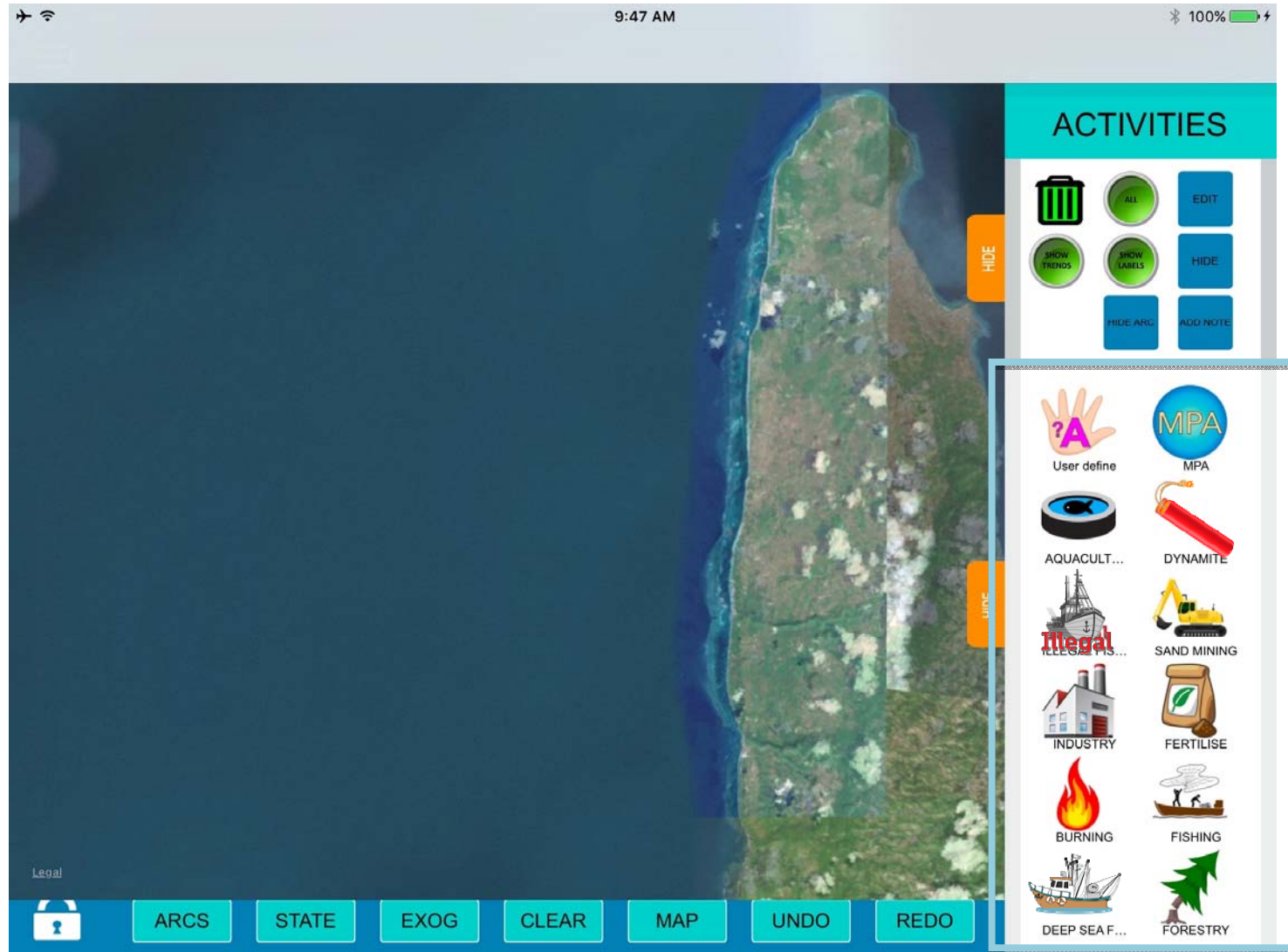


Component / attributes



SESAMME

‘Drag and Drop’ icons (satellite view)



Icons for current component
(Activities)



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1. Add Activities

RESOURCES



PENGEBOMAN IKAN



CYANIDE

SIANIDA



PERIKANAN
TRADISIONAL



PERIKANAN
UKURAN SEDANG

SHOW

SHOW

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ARCS

STATE

EXOG

CLEAR

MAP

UNDO

REDO

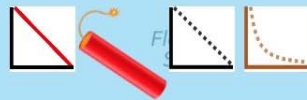


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2. Add trends

RESOURCES



PENGEBOMAN IKAN

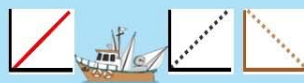


CYANIDE

SIANIDA



PERIKANAN
TRADISIONAL



PERIKANAN
UKURAN SEDANG

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MAP

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3. Add Resources

(Activities hidden)

RESOURCES

Flores
Sea



KARANG



RUMPUT LAUT



IKAN

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MAP

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4. Assign 'states'

(Activities hidden)

RESOURCES

Flores
Sea



KARANG



RUMPUT LAUT



IKAN

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ARCS

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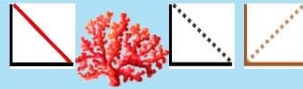
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5. Add trends

(Activities hidden)

RESOURCES

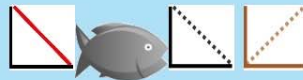
Flores
Sea



KARANG



RUMPUT LAUT



IKAN

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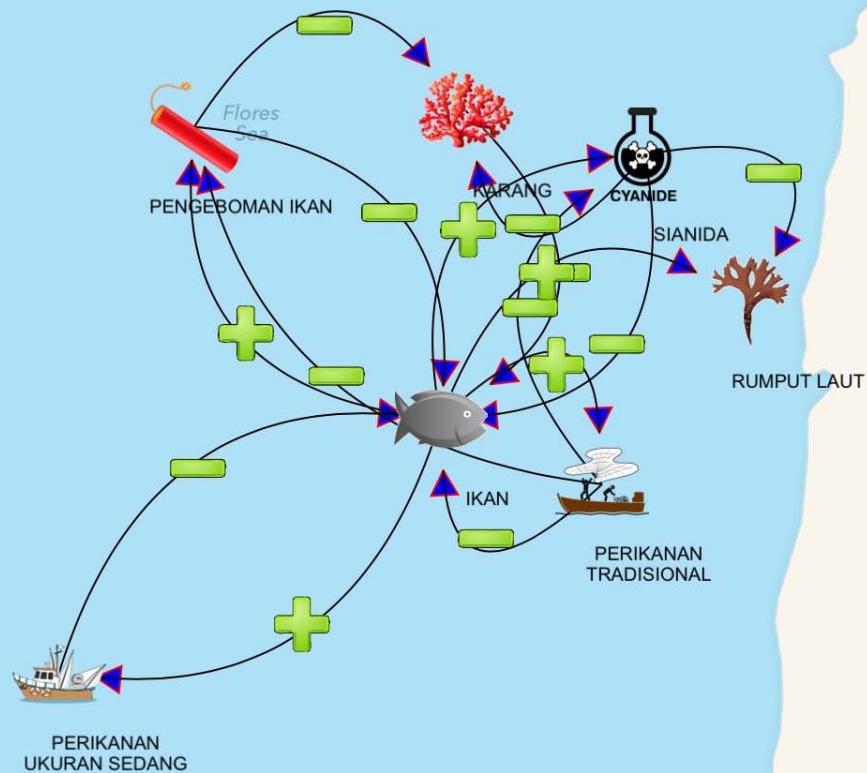


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6. Link together (Trends hidden)

RESOURCES



SHOW

SHOW

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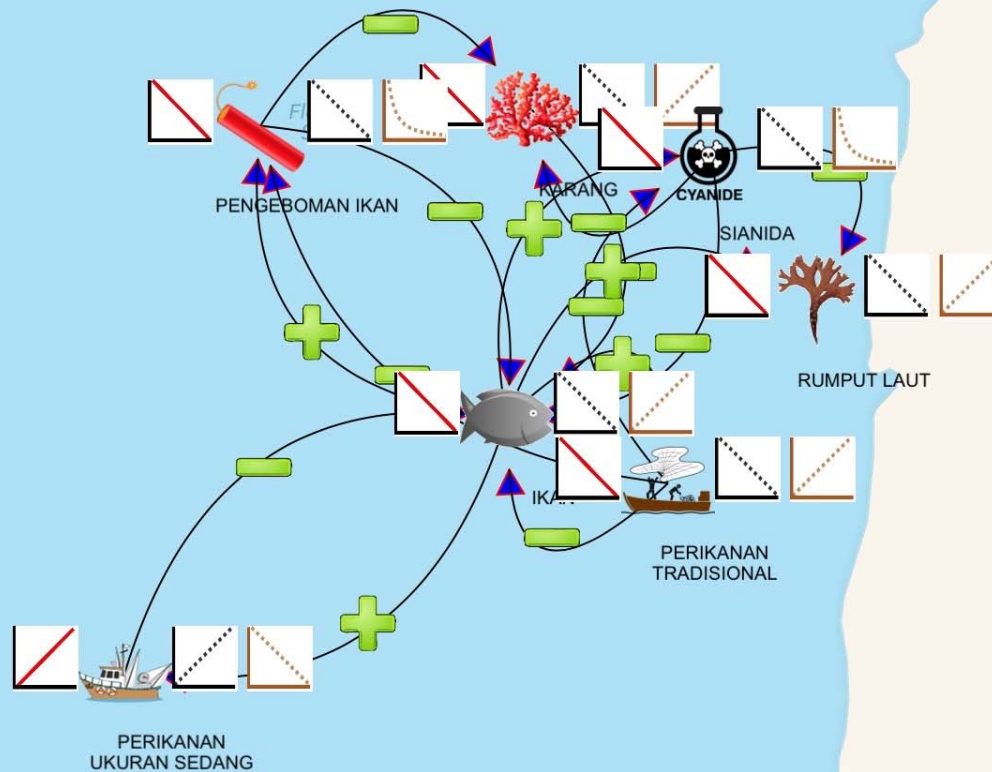
MAP

UNDO

REDO

7. With trends

RESOURCES



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MAP

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MOHS

SHOW



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8. Add Pressures



PENGAWASAN



IKLIM

Flores
Sea

RESOURCES

SHOW



PEMASOK BAHAN
BOM IKAN



BADAI



HARGA



TINGKAT
PENDIDIKAN



ALTERNATIF MATA
PENCAHARIAN

SHOW

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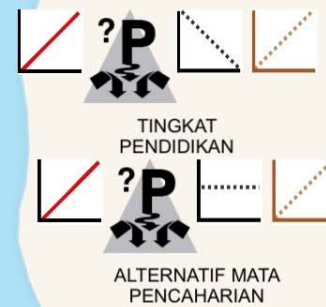
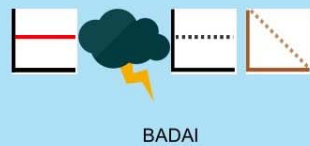
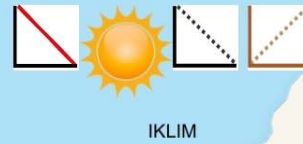


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9. Add trends

RESOURCES



Flores
Sea

SHOW

SHOW

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EXOG

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REDO



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10. Add Decisions

RESOURCES



PENINGKATAN
KAPASITAS

Flores
Sea



BUDIDAYA KARANG



PENEGAKAN
HUKUM



BUDIDAYA IKAN
LAUT

SHOW

SHOW

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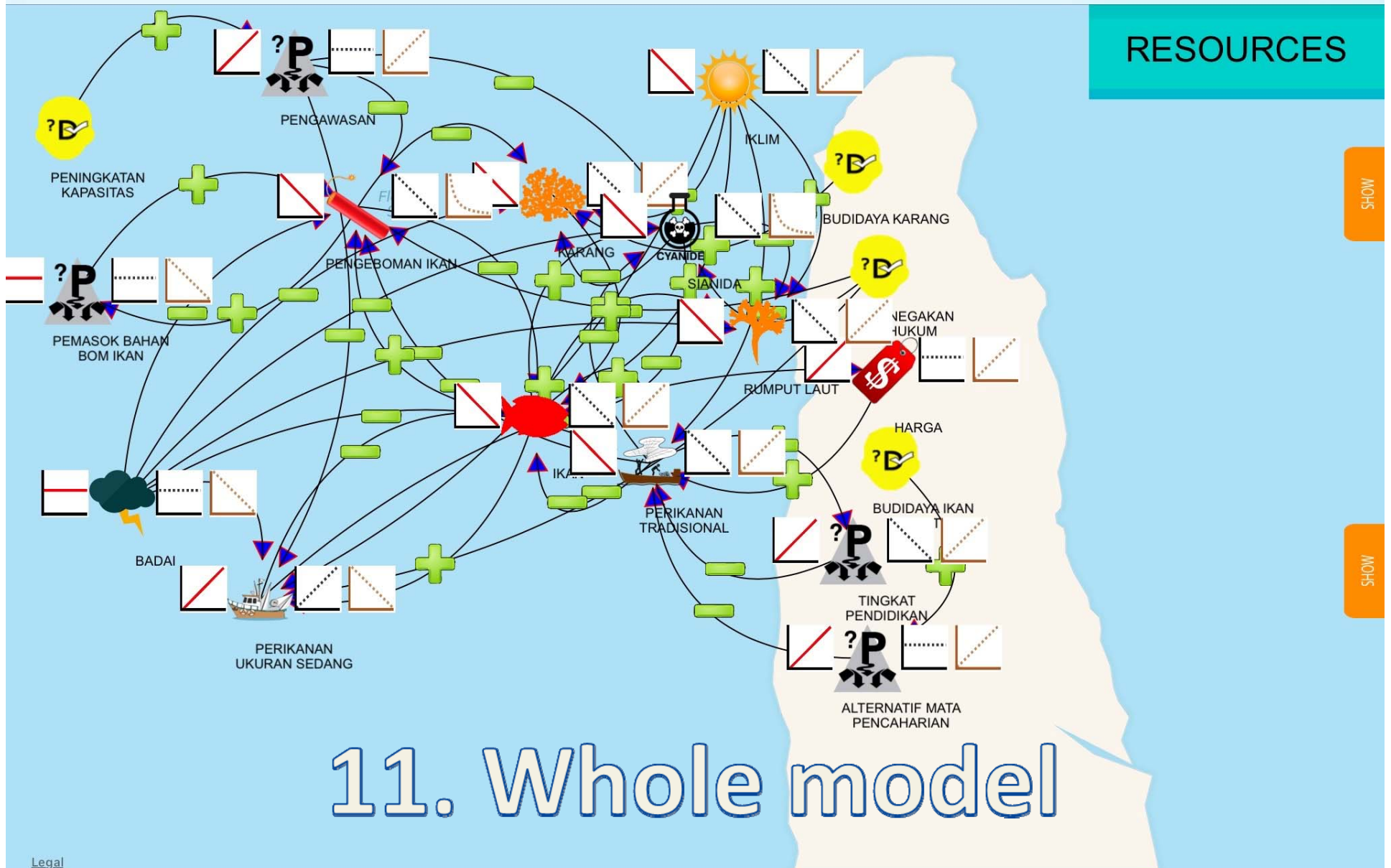
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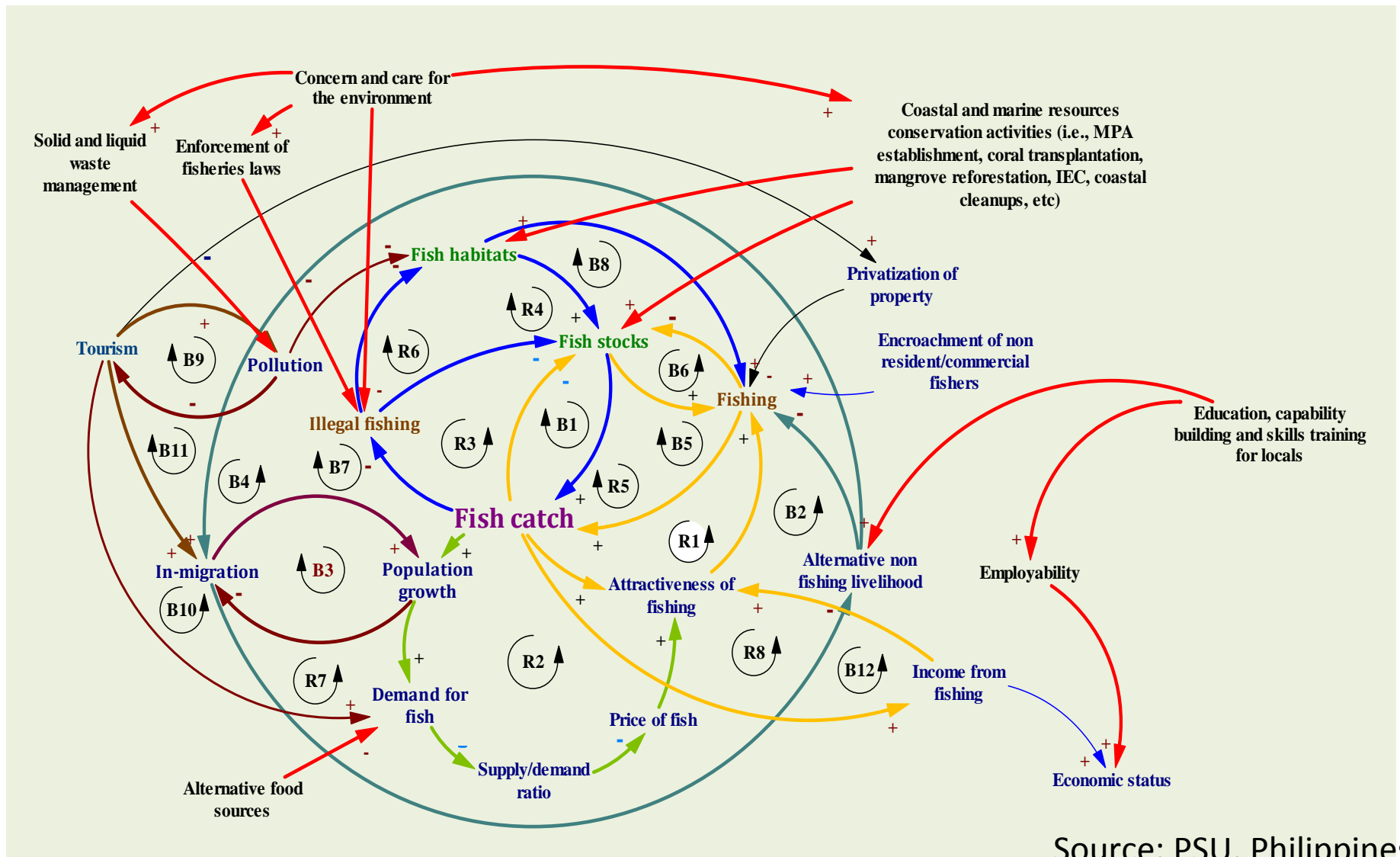
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FGD in Action



Source: PSU, Philippines

Structure, Decisions and Interventions



Source: PSU, Philippines

SESAMME

- Available for iPad (iPhone version under development)
- ‘Soft Release’ at EAS Congress, Vietnam
- Continued development through CCRES project
- Release in 2016 (iTunes)
- *Develop Android version?*

#SESAMMERocks

