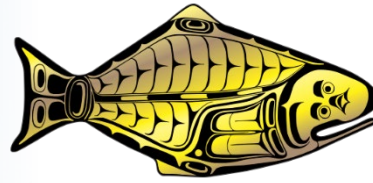


INTERNATIONAL PACIFIC



HALIBUT COMMISSION

# **Pacific halibut multiregional economic impact assessment (PHMEIA): Project Report**

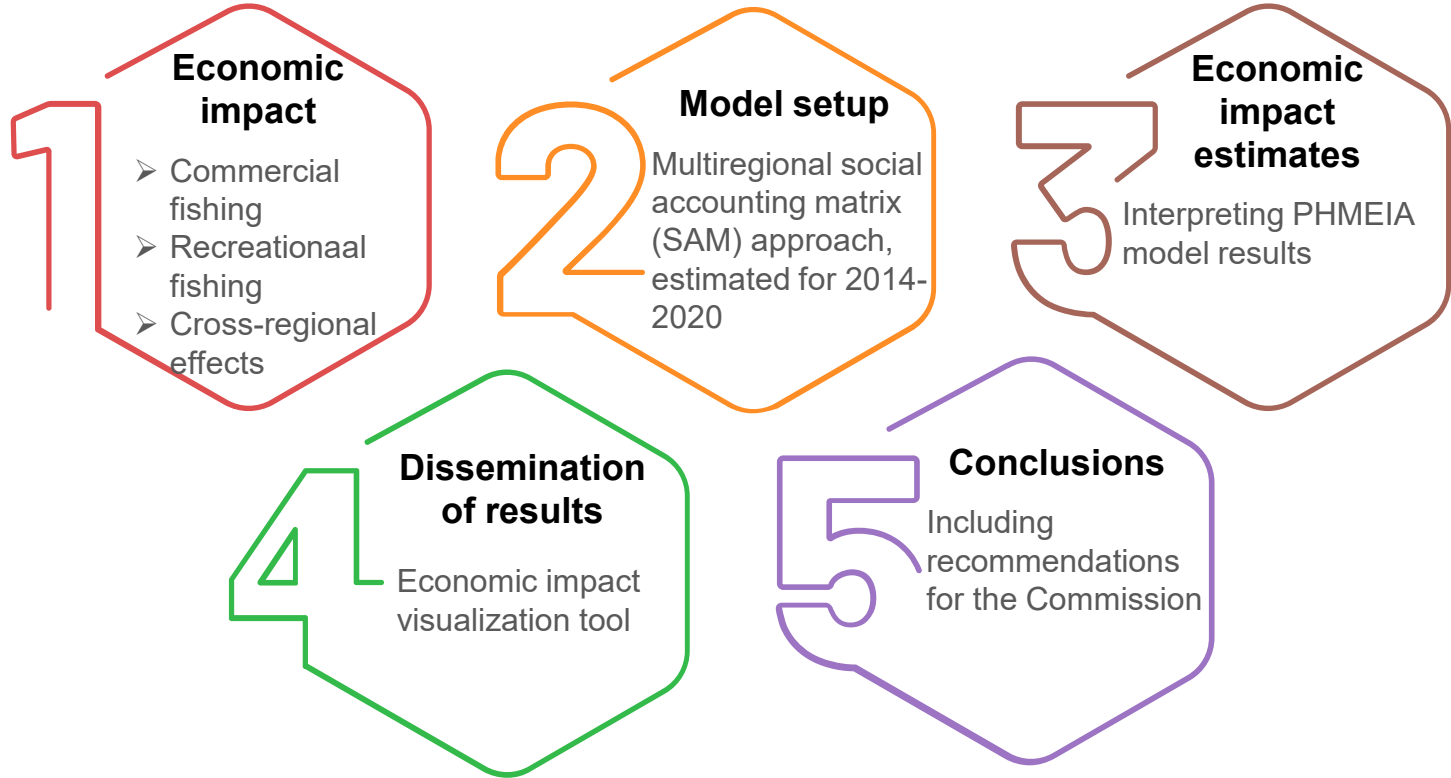
Agenda Item 8

IPHC-2022-AM098-13

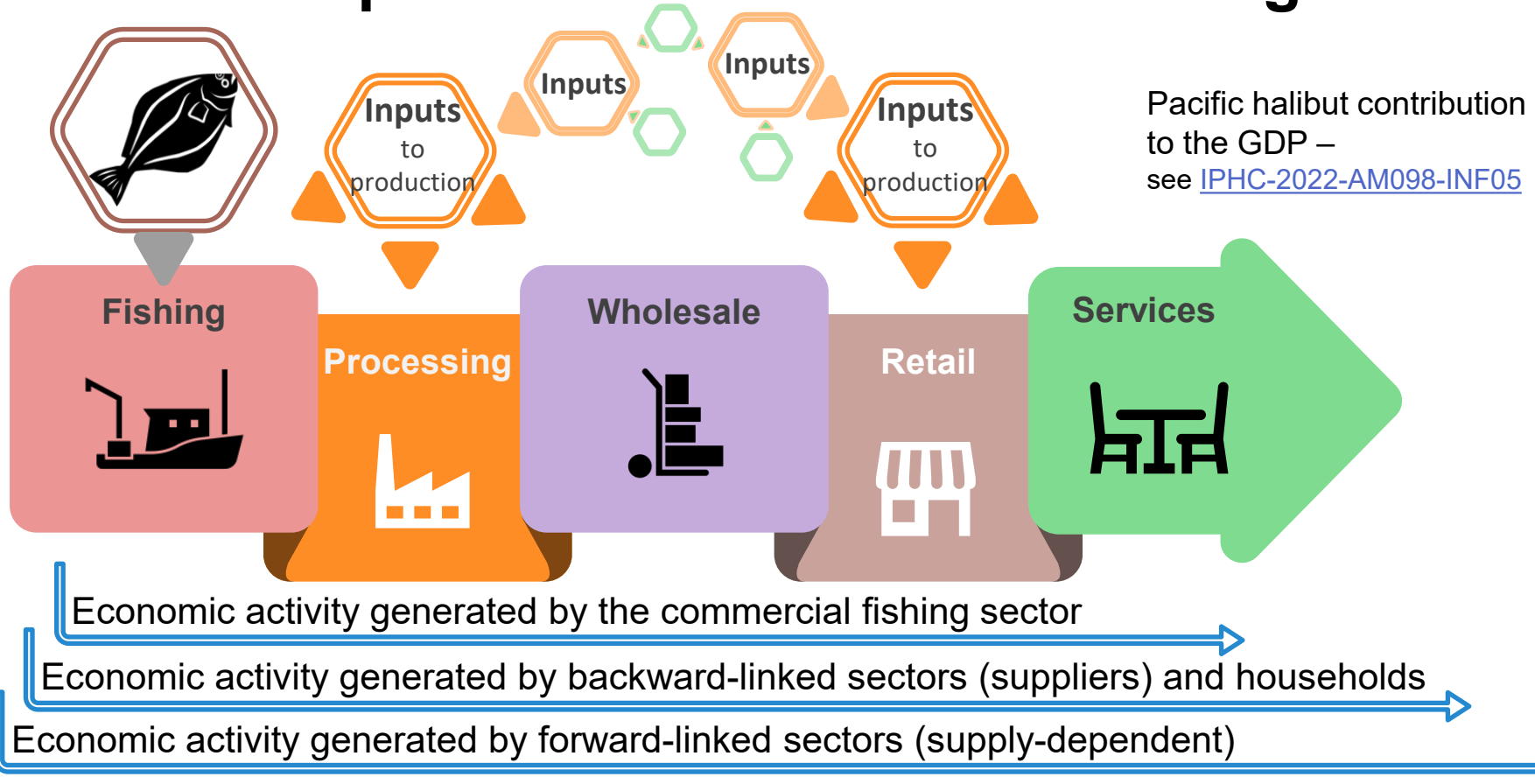
(B. Hutniczak)



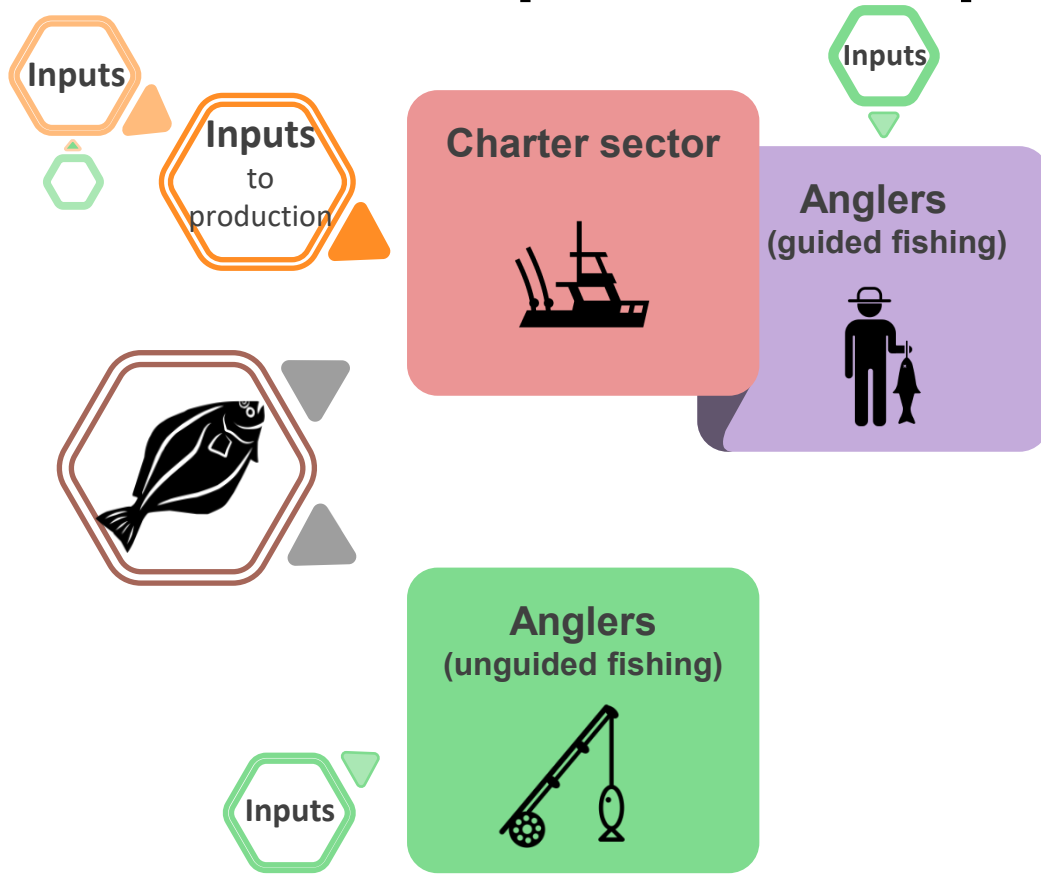
# Outline



# Economic impact of the commercial fishing sector



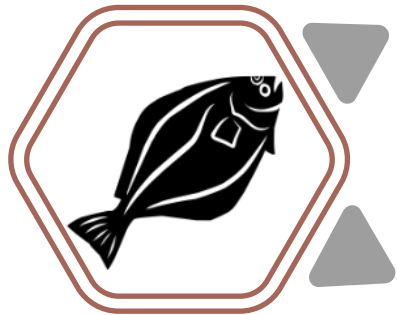
# Economic impact of the sport fishing sector



- Economic activity of businesses directly dependent on the access to the resource
- Economic activity generated by suppliers to the resource-dependent businesses
- Economic activity generated by supplying anglers (guided and unguided)
- Economic activity generated by households spending income dependent on recreational fishing (guided and unguided)



# Multiregional effects



**Economic impact in  
the area of resource  
extraction**



**Cross-regional  
impacts**



➤ Monetary flows related to inputs to production / import of inputs

➤ Monetary flows related to final consumption / export of services

➤ Wages earned by residents vs. non-residents

➤ Profit from ownership - residents vs. non-residents

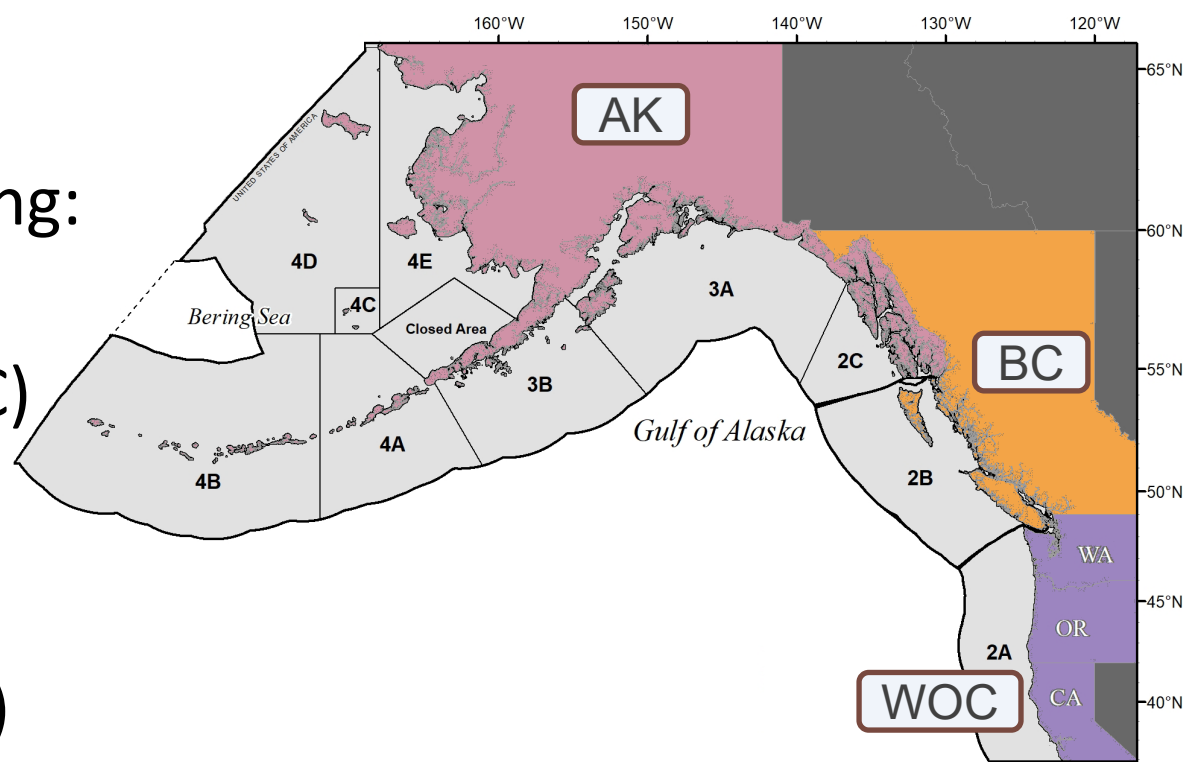


# Regions

Pacific halibut producing:

- Alaska (AK)
- British Columbia (BC)
- West Coast (WOC)  
(WA, OR, and CA)
- Rest of the US (US-r)
- Rest of Canada (CA-r)
- Rest of the world (ROW)\*

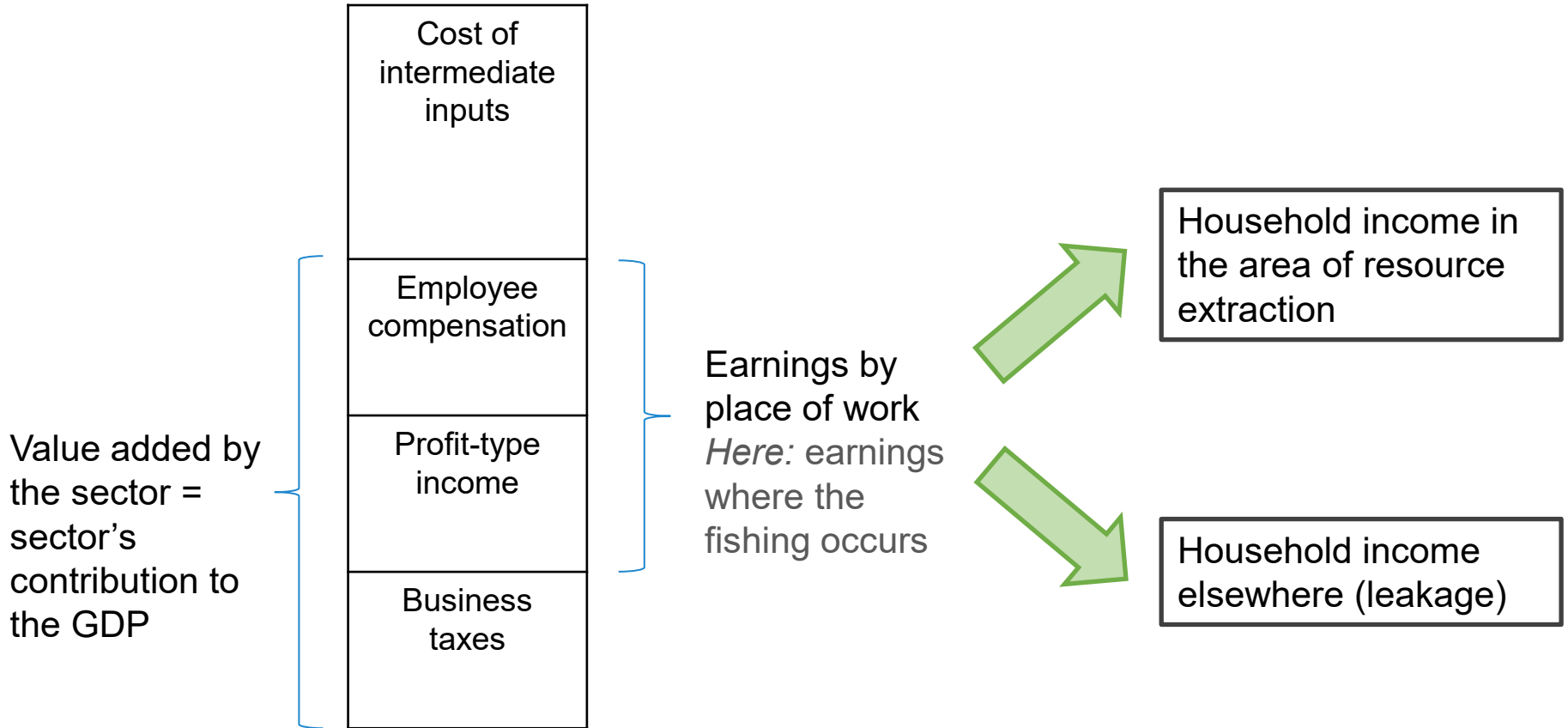
\*treated as exogenous



Multiregional social accounting  
matrix/SAM-based approach  
Estimated for 2014-2020

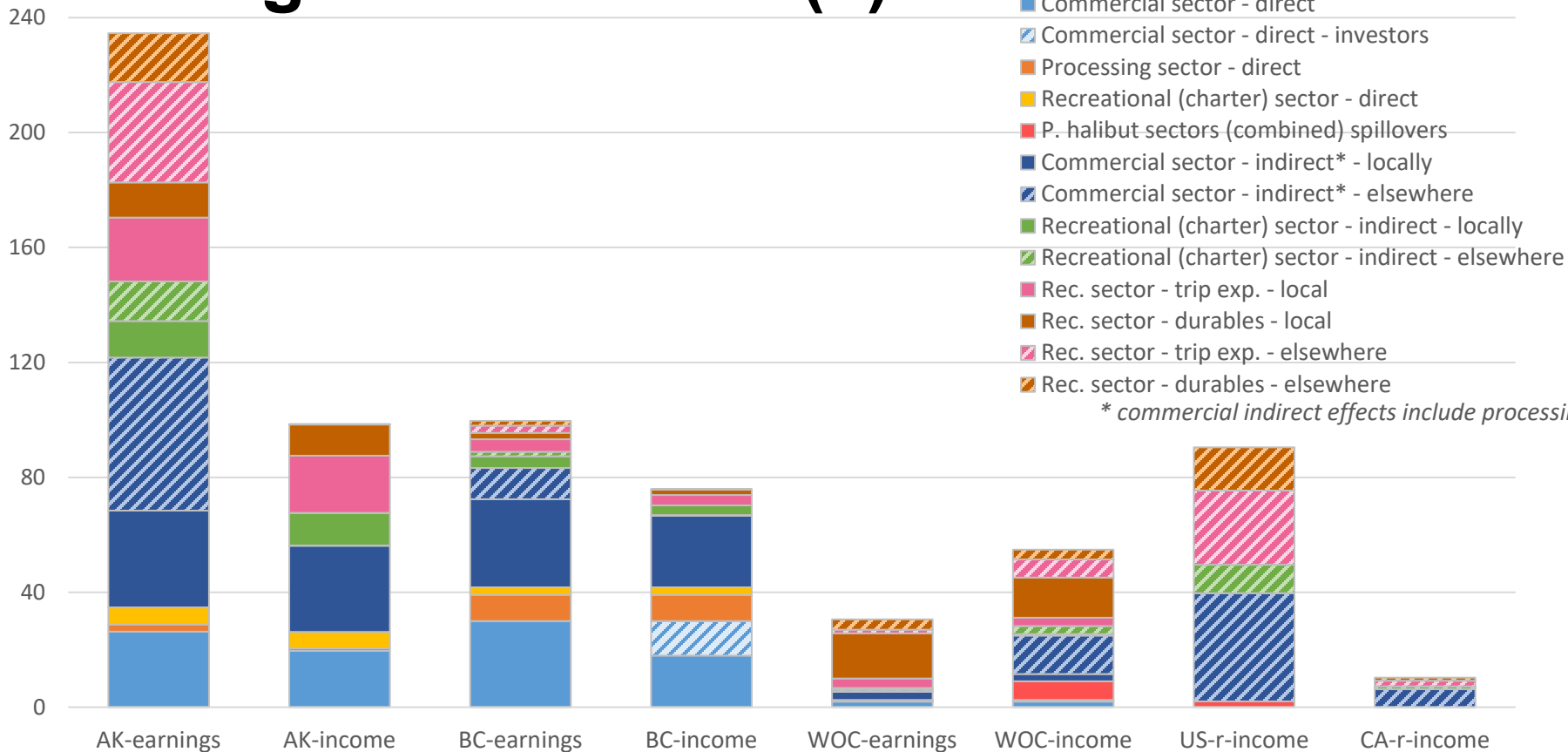


# Direct earnings & income



# Earnings and income (1)

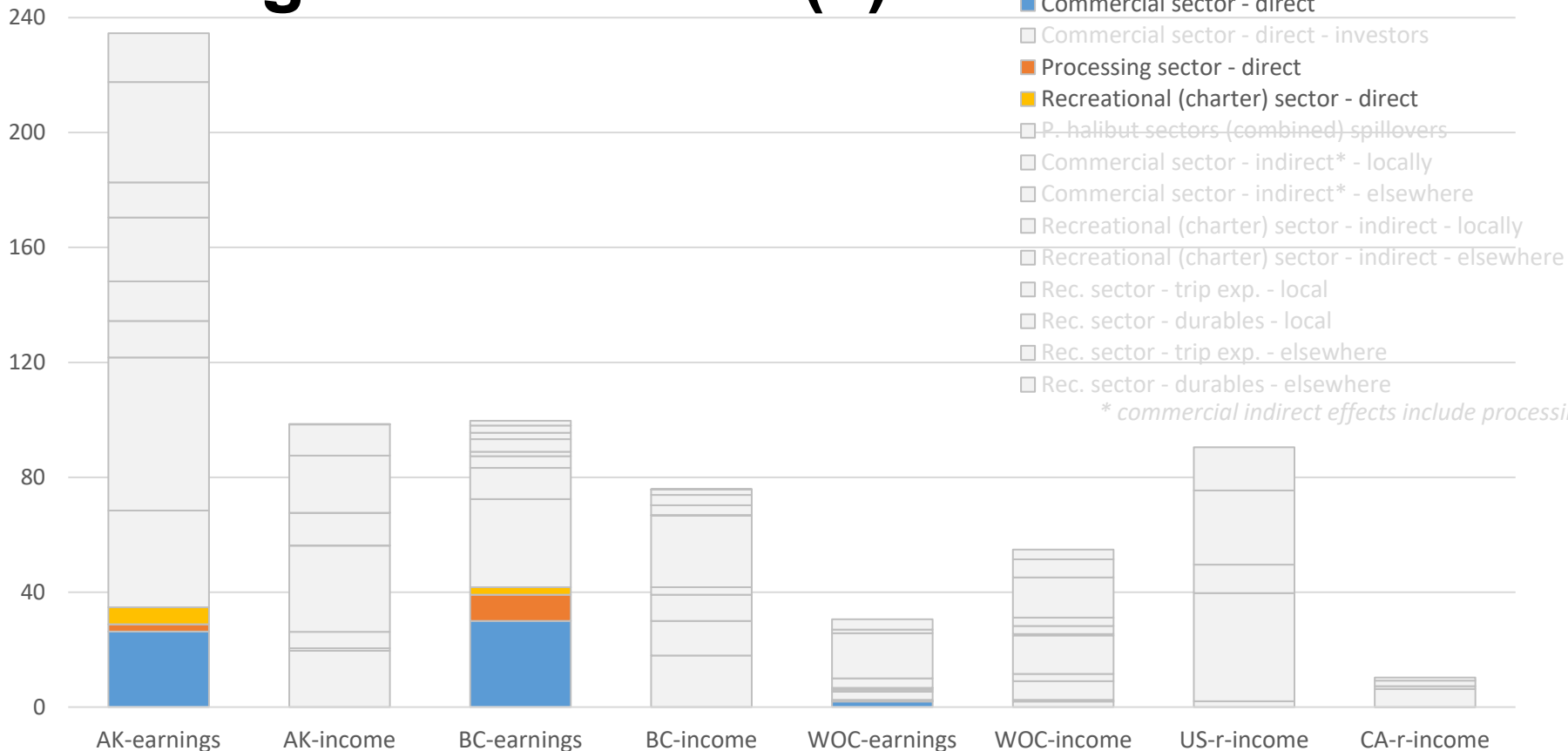
Earnings / income [2019/mil. USD]



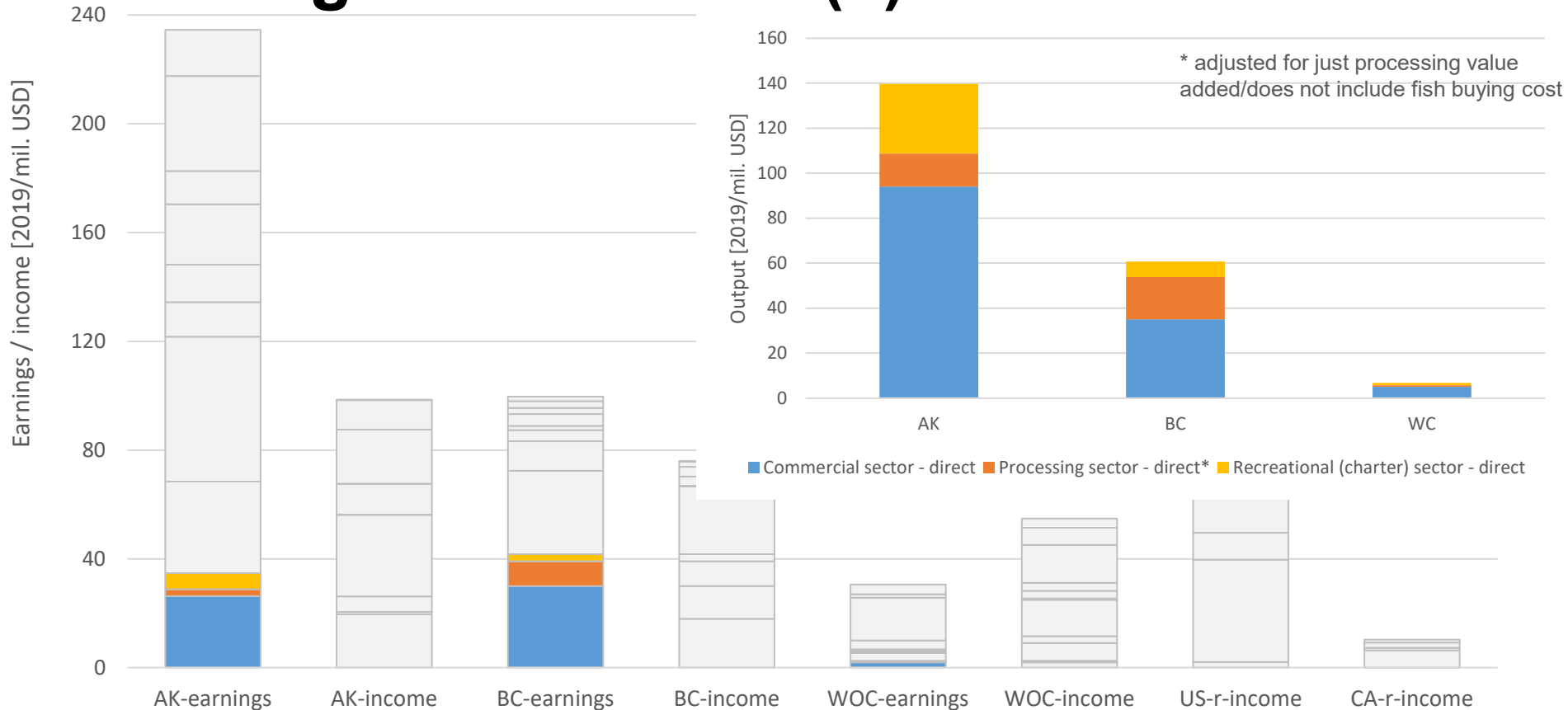


# Earnings and income (2)

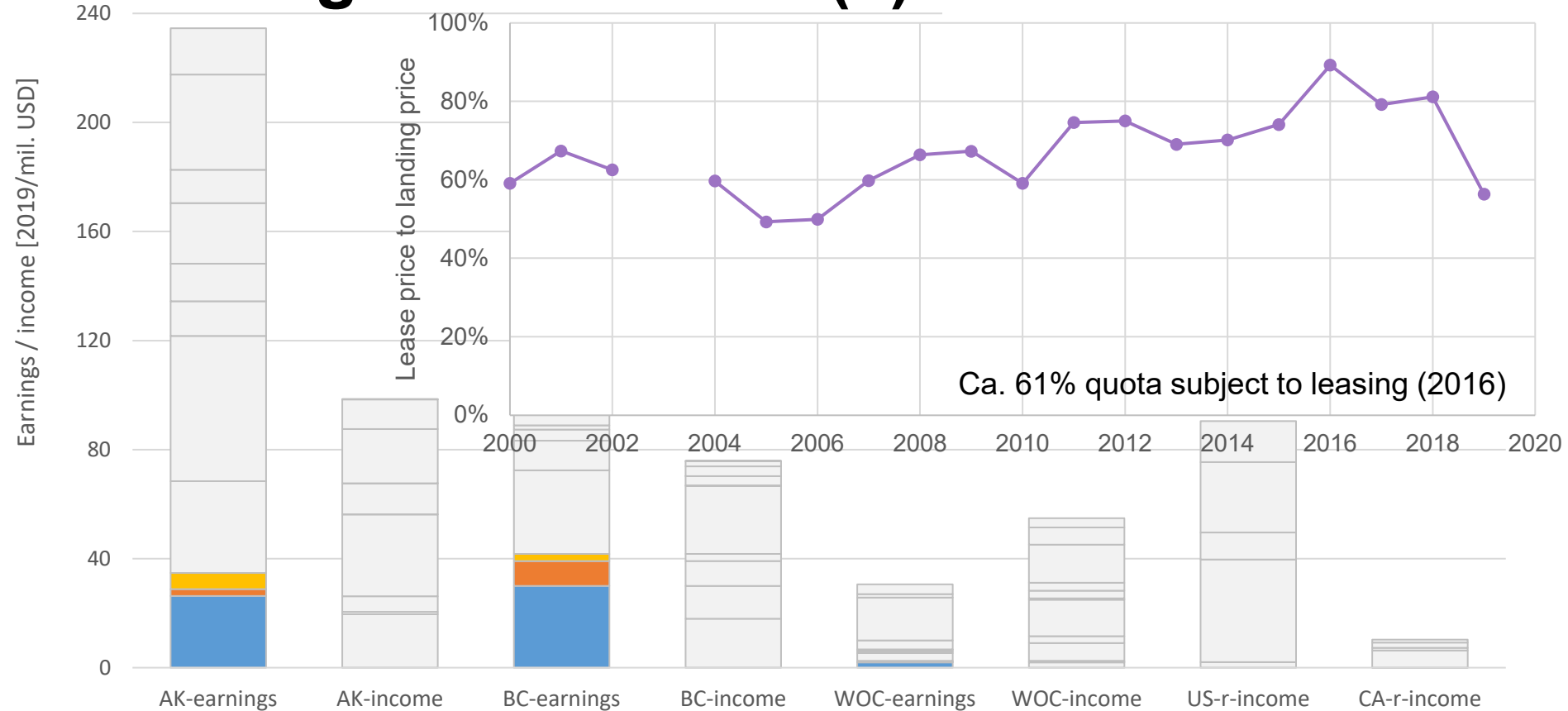
Earnings / income [2019/mil. USD]



# Earnings and income (3)

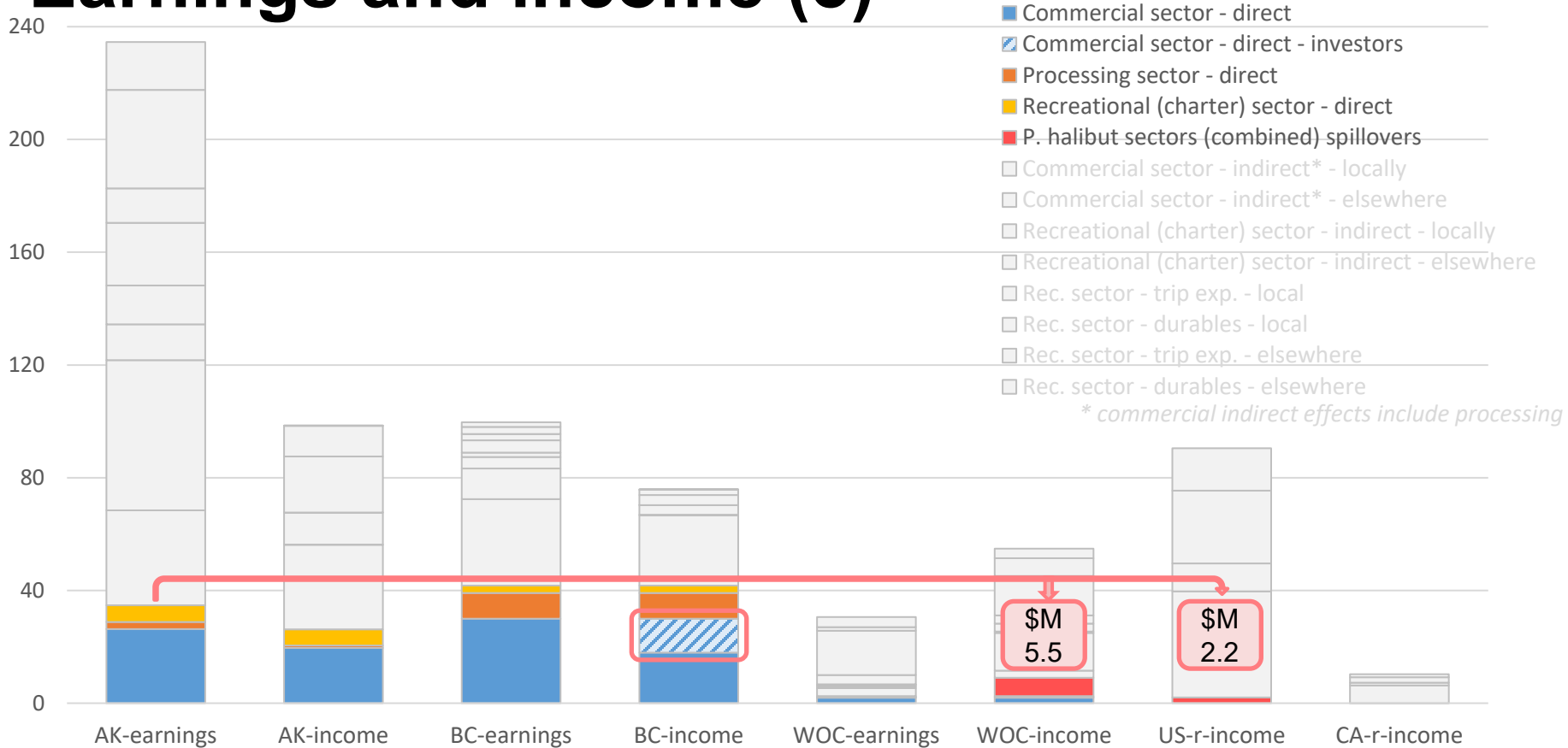


# Earnings and income (4)



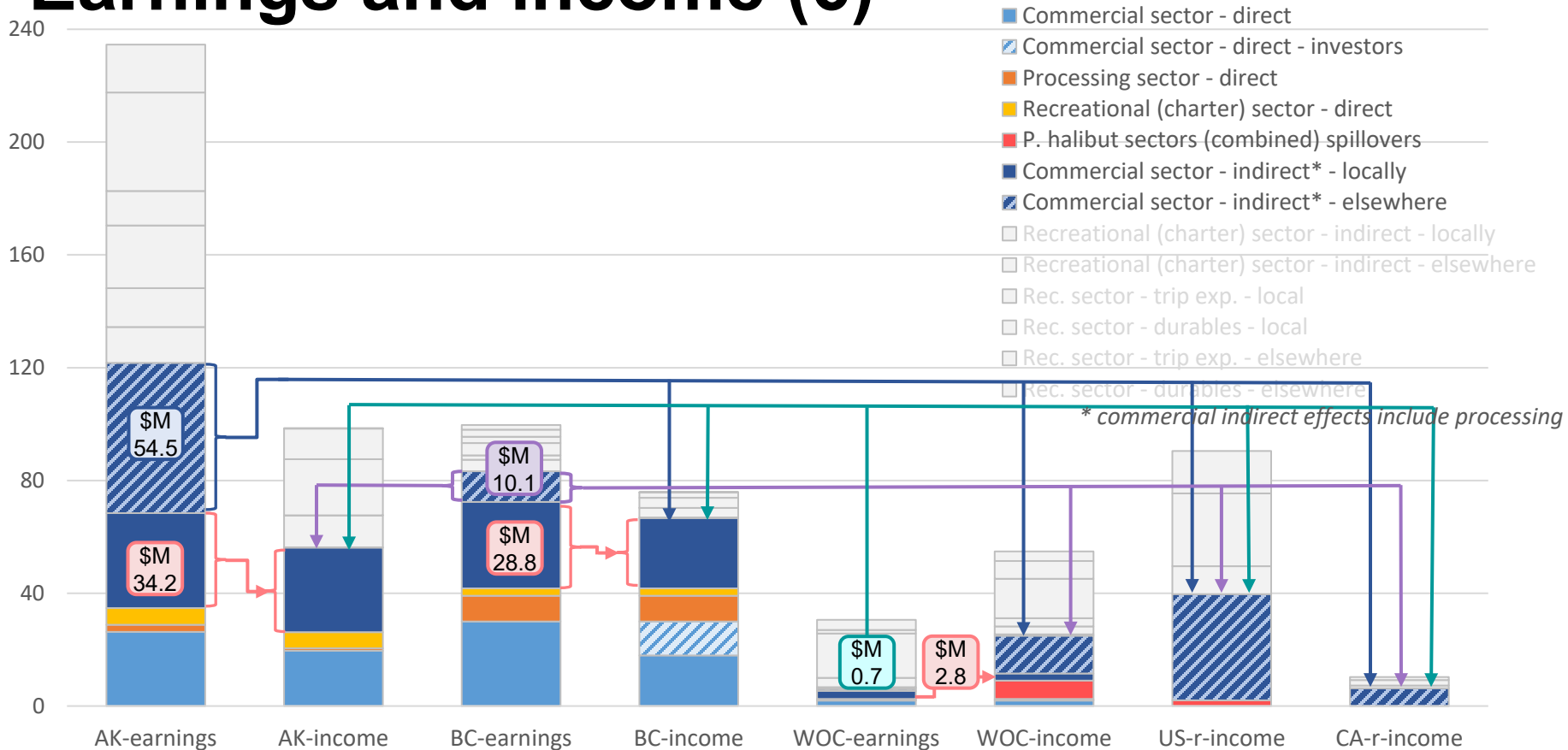
# Earnings and income (5)

Earnings / income [2019/mil. USD]



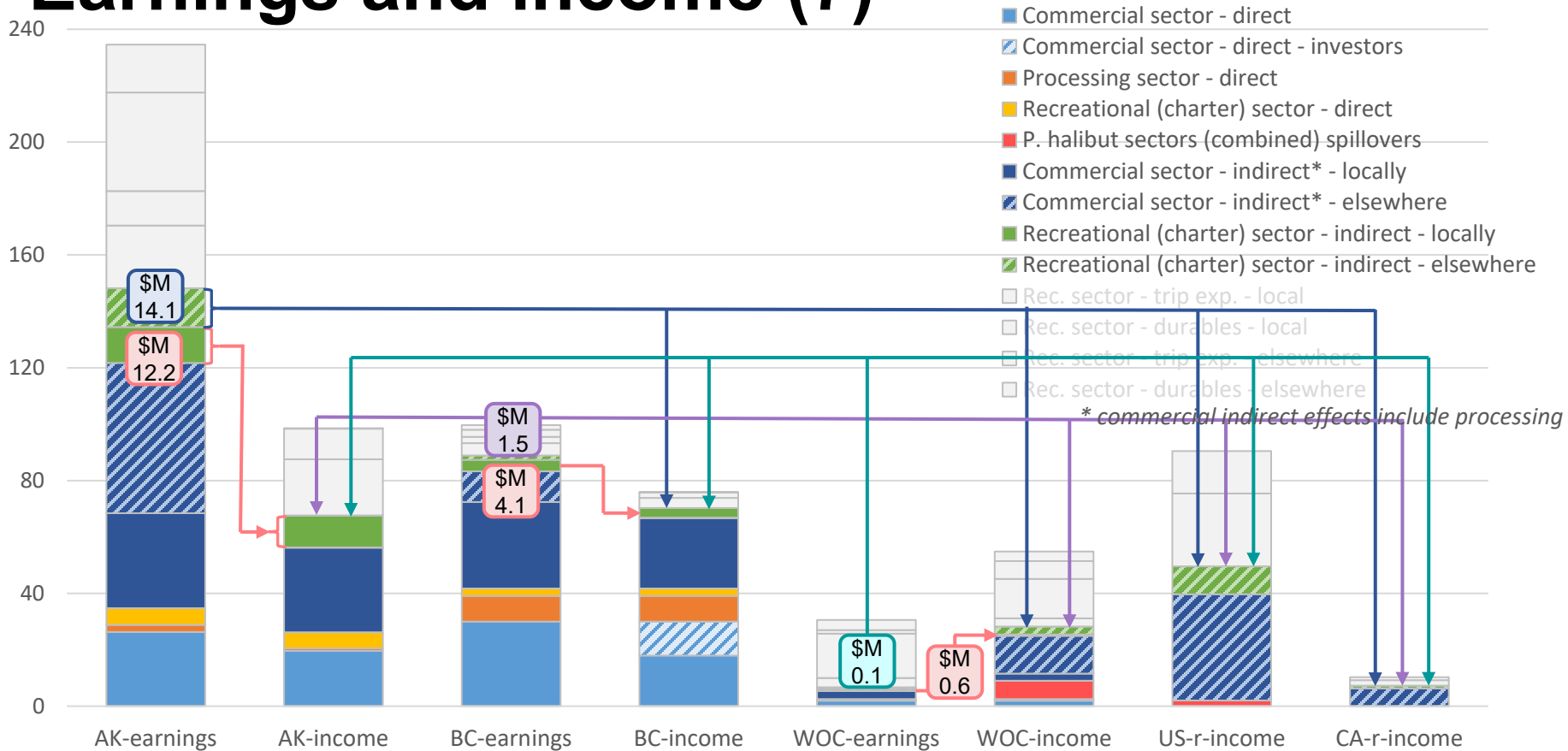
# Earnings and income (6)

Earnings / income [2019/mil. USD]



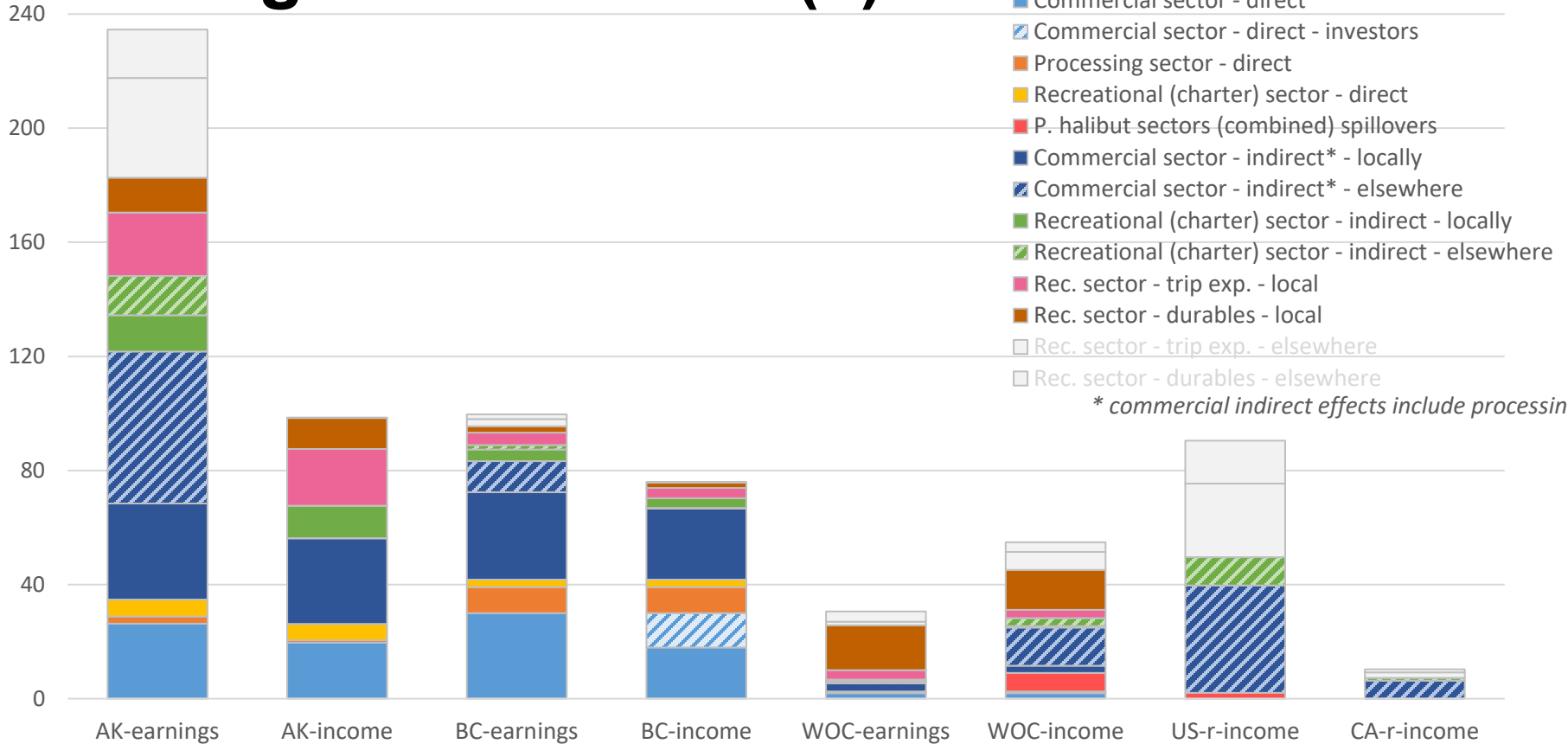
# Earnings and income (7)

Earnings / income [2019/mil. USD]



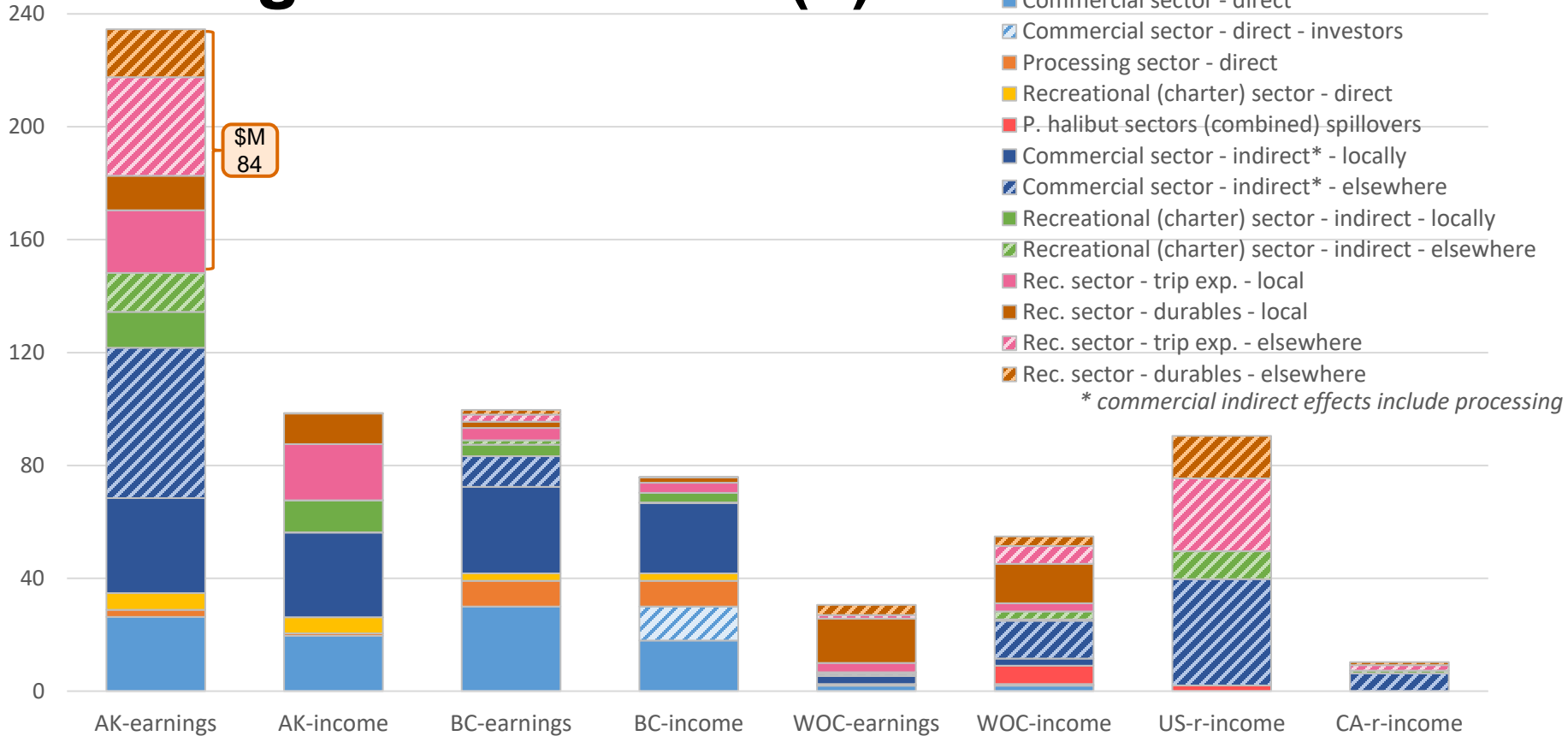
# Earnings and income (8)

Earnings / income [2019/mil. USD]



# Earnings and income (9)

Earnings / income [2019/mil. USD]





# Comparison of the results between sectors (2019)

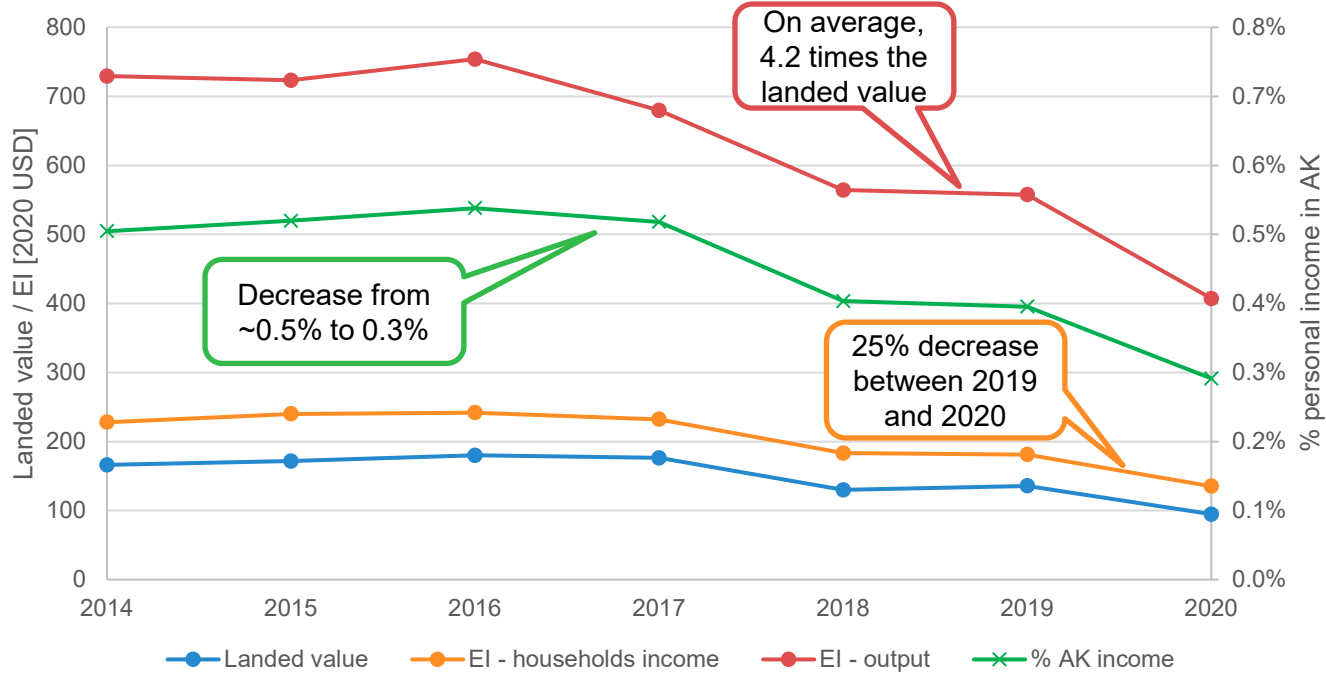
Economic impact (EI)	Unit	Commercial	Charter	Recreational
EI on households	Total in mil. USD	179.1	42.4	146.9
EI locally (excludes spillovers)	Total in mil. USD	114.1	27.6	79.0
EI on households	USD per 1 USD of landed value/USD spent	1.34	1.08	0.74
EI locally (excludes spillovers)	USD per 1 USD of landed value/USD spent	0.85	0.71	0.40
EI on households	USD per 1 lb of removals	7.4	12.0*	20.9
EI locally (excludes spillovers)	USD per 1 lb of removals	4.7	7.3*	11.2

\*impact calculated based on EI on households for Alaska

Note sensitivity to assumption about the share of the sector dependent on Pacific halibut



# EI time series

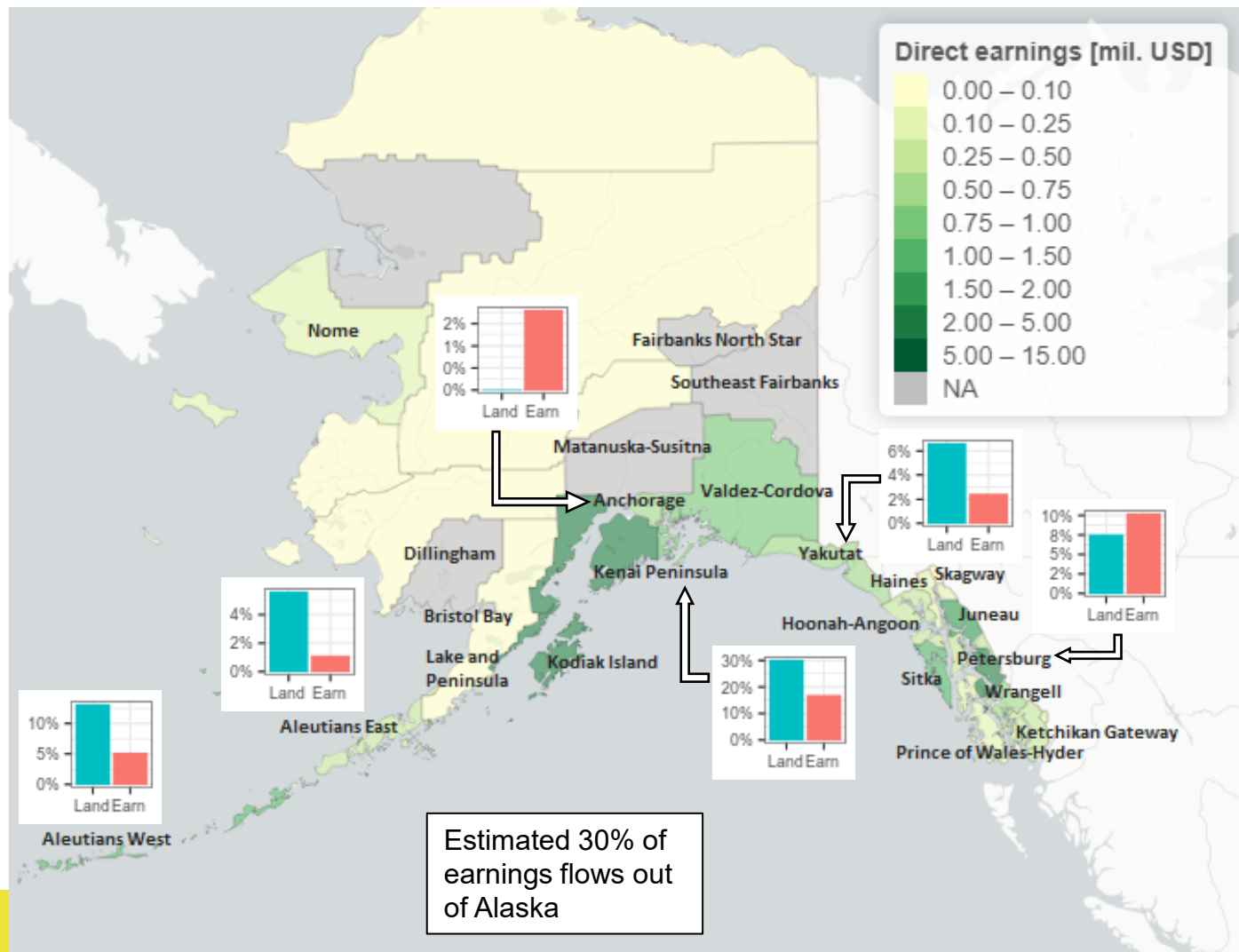


Pacific halibut commercial fishing EI estimates for 2014-2020 in comparison with landed value in mil 2020 USD.



# Community impacts

Bar plots represent selection of county-level comparison between the value of landings and direct earnings [as % of total, 2019]



# Map of the economic impact

[web-based tool](#)

Updated: Jan 11, 2022

[app manual](#)

Select year [2014-2020]:  
2019

Select currency [USD, CAD]:  
USD

Pacific halibut output - commercial fishing, Alaska [mil. USD]:  
108  
\$M 14 (15%) increase

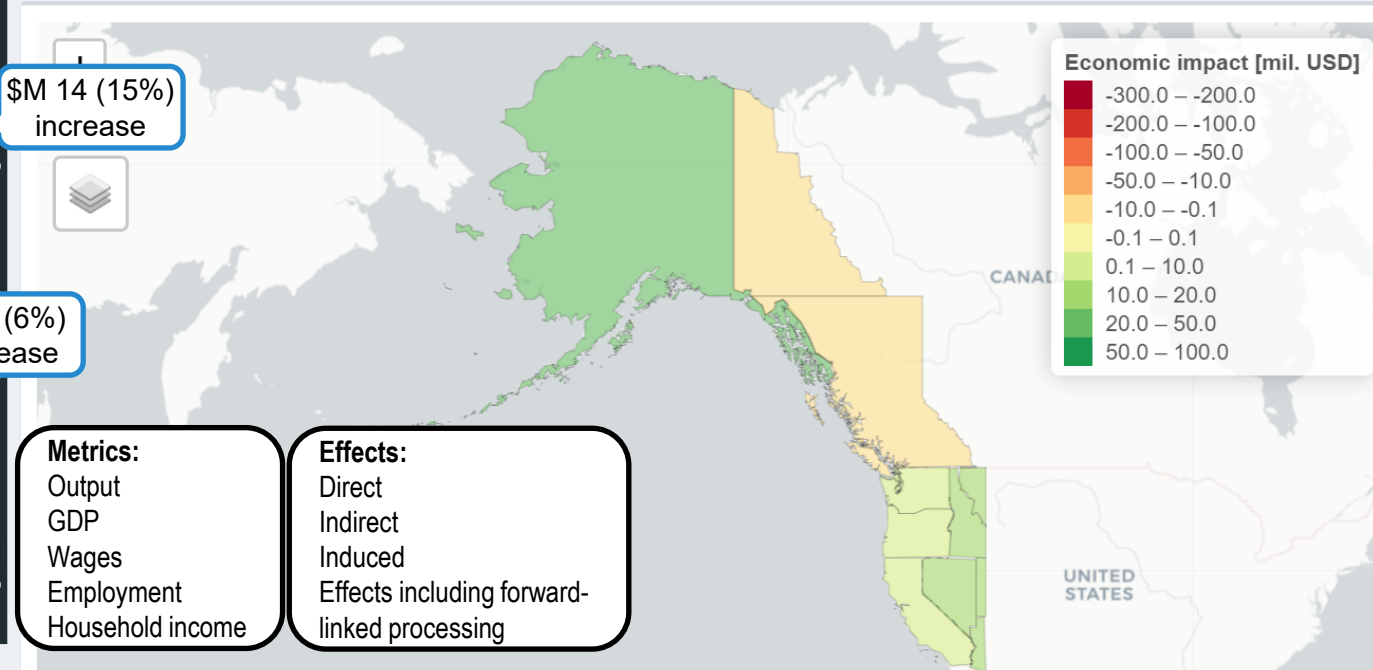
Pacific halibut output - commercial fishing, British Columbia [mil. USD]:  
33  
\$M 2 (6%) decrease

Pacific halibut output - commercial fishing, West Coast [mil. USD]:  
5.5  
\$M 0.5 (10%) increase

Type of impact to display:

Output

- Direct economic impact (Pacific halibut fishery)
- Indirect economic impact
- Induced economic impact
- Include forward-linked (FL) Pacific halibut processing



# Conclusions

- PHMEIA provides a comprehensive understanding of a broad scope of impacts of the Pacific halibut resource
- Revenue generated by direct Pacific halibut sectors accounts for only a fraction of economic activity that would be forgone if the resource was not available to fishers
- Understanding the complex interactions between sectors and regions is particularly important to management of a resource that spans a wide geographical area
- PHMEIA informs on the vulnerability of communities to changes in the state of the Pacific halibut stock throughout its range, highlighting regions particularly dependent on economic activities that rely on Pacific halibut



# Way forward

- PHMEIA is a core product of the IPHC socioeconomic study undertaken to provide comprehensive economic information to support the overall management of the Pacific halibut resource in fulfillment of Commission's mandate
- PHMEIA contributes to a wholesome approach to Pacific halibut management that is optimal from both biological and socioeconomic perspective
- Tasks that would enhance the PHMEIA usability to the Commission and contribute to research integration at the IPHC are included in the *IPHC 5-year Program of Integrated Science and Research (2021-26)*



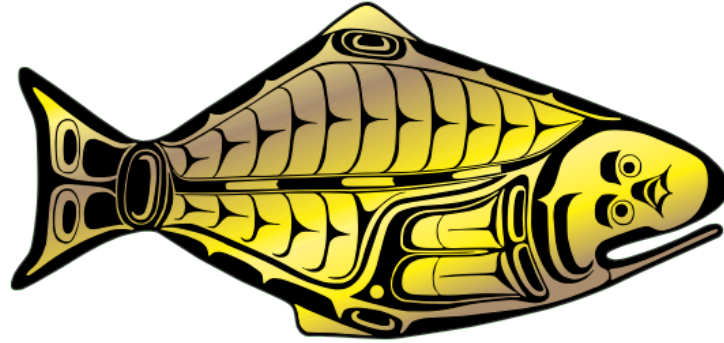
# Recommendations

That the Commission:

- a) **NOTE** paper IPHC-2022-AM098-13 which provides an update on the Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA).
- b) **NOTE** paper IPHC-2022-AM098-INF04 which includes report on the IPHC socioeconomic study of Pacific halibut.



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