

## Introduction

The purpose and need of the SaMTAAC adopted by the committee in October states that

This action is needed because the Shorebased Individual Fishing Quota (IFQ) Program has underattained most of its allocation since the inception of the program in 2011. The underattainment for some northern stocks may be due to the allowance to use fixed gear to harvest shorebased IFQ, declining trawl vessel participation, and the lack of market and infrastructure.

To provide additional details on the attainment of IFQ species, this supplemental report focuses on the attainment of seven select species: sablefish north of 36° N. lat, Dover sole, widow rockfish, yellowtail rockfish north of 40° 10' N. lat., longspine thornyhead north of 34° 27' N. lat., shortspine thornyhead north of 34° 27' N. lat., and Pacific whiting. Using the same methodology as was done in Matson, 2016<sup>1</sup>, the following series of graphs looks at the time series from 1995-2018. The three metrics examined were: landings, harvest specifications, and percent attainment. Landings were queried from the PacFIN comprehensive fish ticket database for the shorebased limited entry trawl fishery (1995-2010) and the IFQ fishery (including gear switched landings; 2011-2018). Discards were not included as the West Coast Groundfish Observer Program (WCGOP) did not start collecting discard information until 2002. The harvest specifications used for management have changed over time. The metric for the total catch, against which attainment is measured, uses those most analogous across the different periods: groundfish fishery harvest guideline (HG; 1995-1997), Optimum Yield (OY; 1998-2010), and Annual Catch Limit (ACL; 2011-2018). Finally, percent attainment is based on these fishery wide harvest specifications (HG/OY/ACL) as there has not been a formal allocation for the trawl sector across years. Given this the trend in trawl vessel attainment of the available catch between periods may be more relevant than attainment level in any particular year. At the same time, with the exception of sablefish, for the species assessed here, the vast majority of the catch is with trawl gear, so large degrees of under attainment likely represent possible opportunities for expansion of trawl activity. Sablefish is one of the few species for which there is a trawl allocation across the entire period, and therefore, a graphic is provided on attainment of that allocation as well as the overall harvest specification. Each plot for each metric/species combination shows the average metric between 1995-2000, 2001-2010, and 2011-2018 (dotted lines). As an addition to the original three metrics, this report includes a figure of the percent attainment of each species of the portion of the harvest specification allocated to the IFQ fishery from 2011-2019.<sup>2</sup>

***All figures presented below, with the exception of Figure 2 for the comparison of sablefish landings to the trawl allocation, are in the following order: landings (mt) in the top left panel, harvest specification (HG/ OY/ ACL) in the top right panel, percent attainment of harvest specification in the lower left panel, and the IFQ percent attainment in the lower right panel.***

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<sup>1</sup> Matson, Sean. 2016. [Exploration of landings, harvest specification and attainment time series, for stocks of interest in the historical shorebased LE trawl fishery and contemporary IFQ program.](#) Pacific Fisheries Management Council, 7700 Ambassador Place NE, Suite 200, Portland, OR.

<sup>2</sup> Trawl sector allocations for every IFQ species began in 2011 as a necessity of implementing the IFQ program. Based on IFQ Vessel Account System.

## Sablefish North of 36° N. lat. (Figure 1)

Sablefish north is one of the most highly attained and valuable species in the groundfish fishery. It is targeted by both fixed gear, as the primary target species, and trawl vessels, to access multi-species complexes such as DTS (Dover sole, thornyheads, and sablefish). Landings were at their highest in the analytical period during 1996 and have seen fluctuations over time. The lowest landings were in 2002, which coincided spawning biomass has increased likely due to large recruitment classes in 2008, 2010, 2013, and 2016.<sup>3</sup> Percent attainment of the overall harvest specification has ranged from 29.8 percent (2004) to 49.9 percent (2008), with the IFQ era seeing only slight fluctuations around the IFQ era average percent attainment of 43.7 percent. In terms of the trawl allocation, sablefish north has ranged from 63.8 percent in 2004 to 114 percent in 1996 (*Figure 2*). While the IFQ era percent attainment showed little variability around the average of 93 percent, the first two eras saw distinct swings in the percent attainment. The IFQ fishery has seen over 90 percent attainment of its allocation since 2011.

## Dover sole (Figure 3)

Dover sole has a highly variable landings history, with trawl landings ranging from 5,740 mt in 2006 to over 12,000 mt in 1996. With the implementation of the IFQ program in 2011, the landings and variability have decreased, with landings averaging 7,000 mt. Some participants in the fishery have suggested that sablefish north has become a constraining species to access Dover sole in recent years while others have suggested that Dover markets have been a problem due, in part, to competition with imports. While landings have been variable, the ACL/OY has been increasing since 2006, with the ACL reaching 50,000 mt for the last five years. The increasing ACLs combined with lower landings result in the percent attainment decreasing over the time series, with the IFQ era averaging 21.4 percent. IFQ percent attainment has ranged between 12.6 percent (2019) to 35.9 percent (2013) since 2011.

## Widow Rockfish (Figure 4)

Prior to the overfished declaration in 2001, widow rockfish was one of the primary species targeted by midwater trawling vessels and saw landings averaging 5,000 mt and percent attainment ranging from approximately 75-100 percent. During the rebuilding years (2001-2010), there were minimal landings of widow, averaging only 257 mt which was only five percent of the previous time blocks' average landings. In 2011, widow rockfish was declared rebuilt and has seen steadily increasing landings, ACLs, and percent attainment. In 2017, the 2015 stock assessment showed a larger and less depleted stock than in 2011 resulting in the ACLs increase by 6.7 times. The trawl industry was able to access that stock in the early months of the year via the trawl gear exempted fishing permit (EFP) to see landings increase over 7.1 times that of 2016. While these rockfish markets are still in development, the trend in midwater rockfish landings is up and the IFQ fishery has seen percent attainment increase from an average of 42 percent from 2011-2013 to 95 percent in 2018-2019.

## Yellowtail Rockfish North of 40° 10' N. lat. (Figure 5)

While yellowtail rockfish was never declared overfished in the early 2000s, the stock did see a reduction in overall landings and percent attainment with targeting being restricted without access to co-occurring species (widow and canary rockfish) and the inability to fish midwater rockfish outside of the Pacific

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<sup>3</sup> Haltuch, M.A., Johnson, K.F., Tolimieri, N., Kapur, M.S., and Castillo-Jordán, C.A. 2019. Status of the sablefish stock in U.S. waters in 2019. Pacific Fisheries Management Council, 7700 Ambassador Place NE, Suite 200, Portland, OR. 398 p.

whiting season, which does not start until late spring. The ACL/OY was at its lowest in 1997 and has generally been increasing since that time. Since the assessment in 2015, the ACL has been declining as the stock assessment assumes full ACL removals. Yellowtail rockfish follows a similar percent attainment pattern as widow rockfish, with the implementation of the trawl gear EFP promoting a sharp increase in landings and attainment of the ACL starting in 2017. While not to the same degree as widow rockfish, yellowtail rockfish has also seen an approximate 50 percent increase in the IFQ sector attainment with 2018-2019 averaging 75 percent compared to 24 percent in 2011.

## Longspine and shortspine thornyhead North of 34° 27' N. lat. (Figure 6, Figure 7)

Shortspine and longspine thornyheads have been managed north and south of 34° 27' N. lat. with separate harvest specifications since 2005. Prior to 2005, both thornyhead species assessments only included the area north of Point Conception and therefore the figures below provide the catch in the area north of Point Conception compared to the harvest specifications for the overall stock from 1995-2004. Both species are part of the DTS complex targeted by bottom trawlers along with Dover sole and sablefish. Shortspine thornyhead north saw the greatest landings and highest percent attainment in 1995-1996, with IFQ era landings and percent attainment varying around the average. Longspine thornyhead north landings have been volatile, with peak years in 1995, 2002, and 2010. A majority of these high levels of landings coincide with the high levels of Dover landings, with which they are caught in the DTS complex. In the IFQ era, the lowest and highest landings of longspine thornyhead came in back to back years (2016 and 2017) even as the ACLs beginning in 2015 were approximately 60 percent higher than in 2014. In terms of IFQ sector attainment, both species have seen declines over time, with percent attainment ranging from ~50-60 percent in 2011-2014 and dropping to 36 percent for shortspine thornyhead north and 11 percent for longspine thornyhead north in 2019 (lowest in the IFQ era).

## Pacific Whiting (Figure 8)

Pacific whiting is managed via the Pacific Whiting Treaty between U.S. and Canada. Unlike the other stocks discussed above, the ACLs are determined on an annual basis instead of biennially. On the West Coast, Pacific whiting are targeted by three sectors which receive a specified proportion of the fishery HG- the shoreside sector (operating within the IFQ program; 42 percent), the catcher/processor sector (at-sea; 34 percent) and the mothership sector (at-sea; 24 percent). Figure 7 below represents the landings and associated attainment for the shoreside fishery (and any incidental landings in the shorebased trawl fishery). Landings were steady prior to 2001 and have since seen variable landings through 2018. The most recent two years (2017 and 2018) were the highest landings on record for the shoreside fishery, which corresponded with the record high ACLs. In terms of percent attainment of the harvest specification, the attainments were close to the average in the early era (1995-2001) and saw more variation in the latter two eras. Percent attainment in the IFQ fishery was near 100 percent at the start of the program but dropped to less than 50 percent in 2015. In more recent years, IFQ attainment has been over 75 percent.



Figure 1. Landings (mt; top left), ACL/OY/HG (top right), percent attainment of ACL/OY/HG (bottom left), percent attainment of IFQ allocation (bottom right) for **sablefish north** of 36° N. lat.

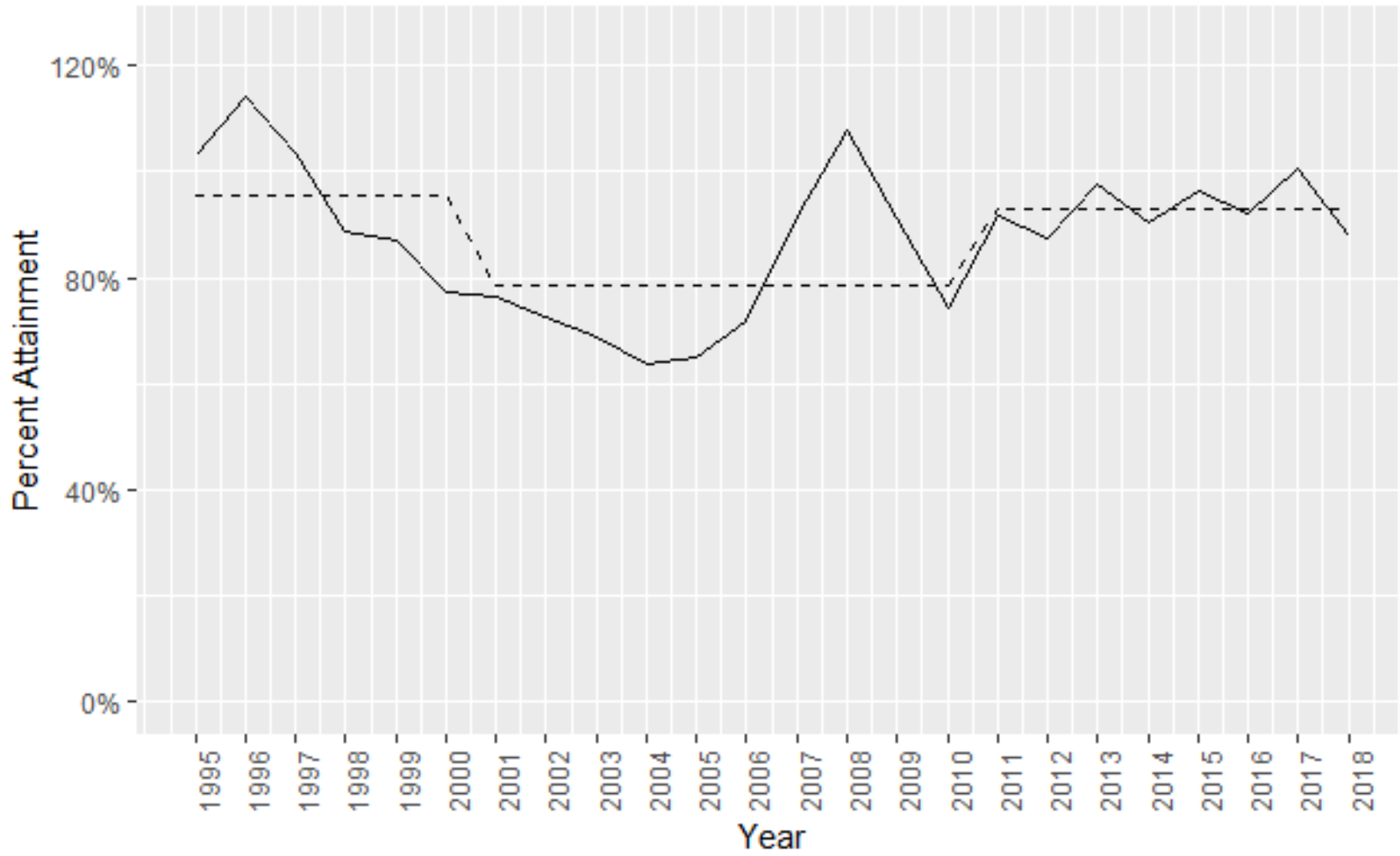


Figure 2. Percent attainment of the **sablefish north of 36 N. lat.** trawl allocation, **1995-1998.**

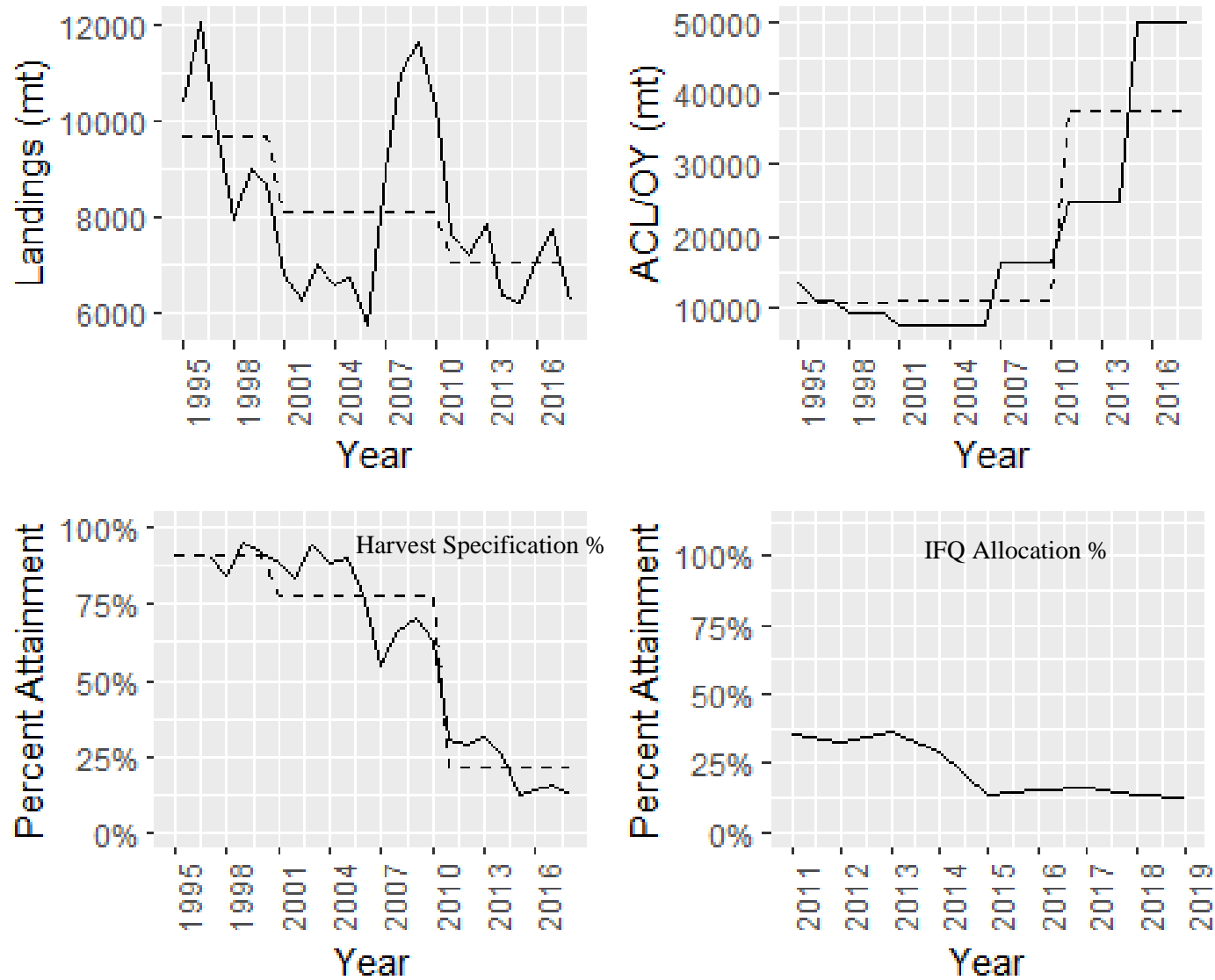


Figure 3. Landings (mt; top left), ACL/OY/HG (top right), percent attainment of ACL/OY/HG (bottom left), percent attainment of IFQ allocation (bottom right) for **Dover sole**.

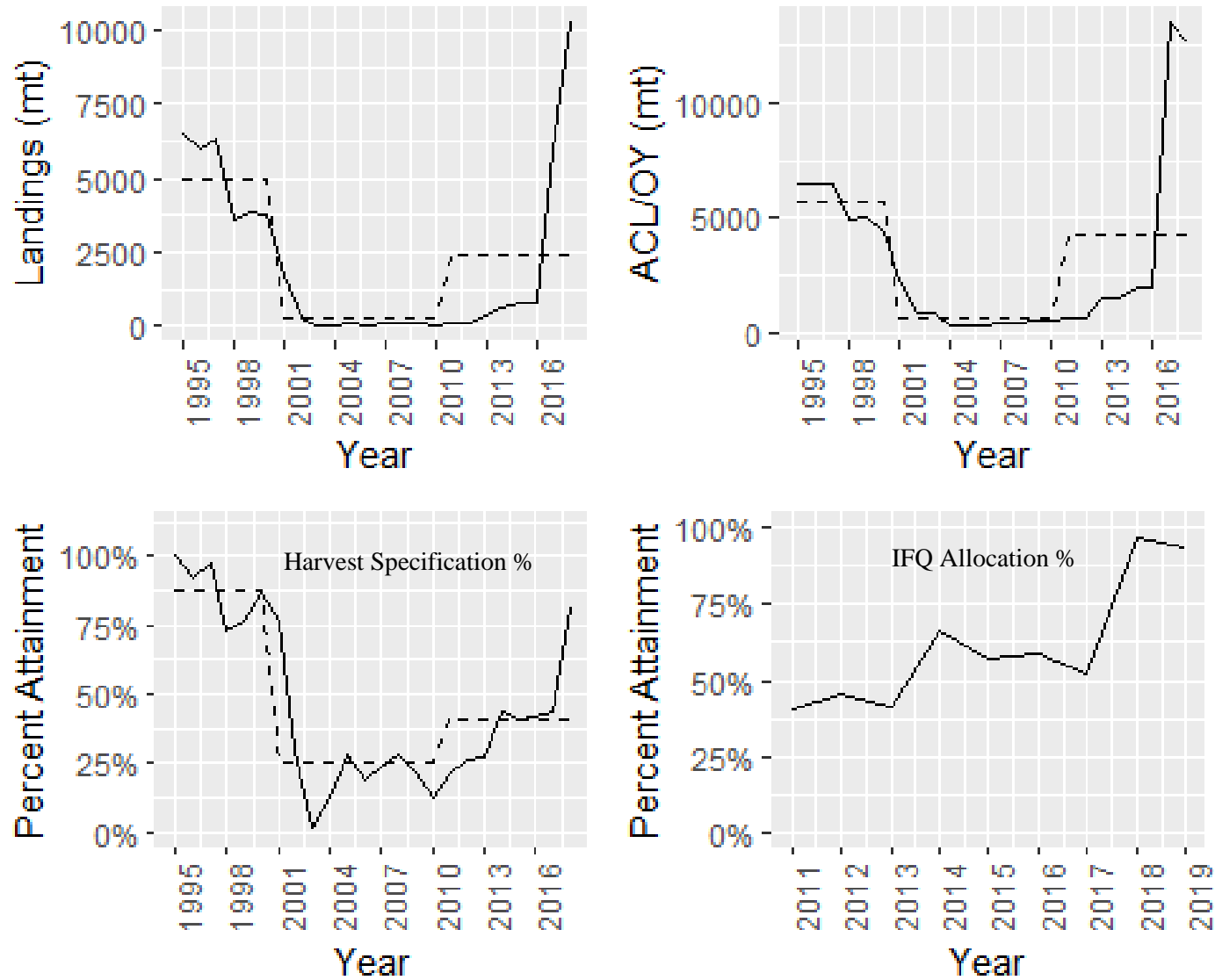


Figure 4. Landings (mt; top left), ACL/OY/HG (top right), percent attainment of ACL/OY/HG (bottom left), percent attainment of IFQ allocation (bottom right) for **widow rockfish**.

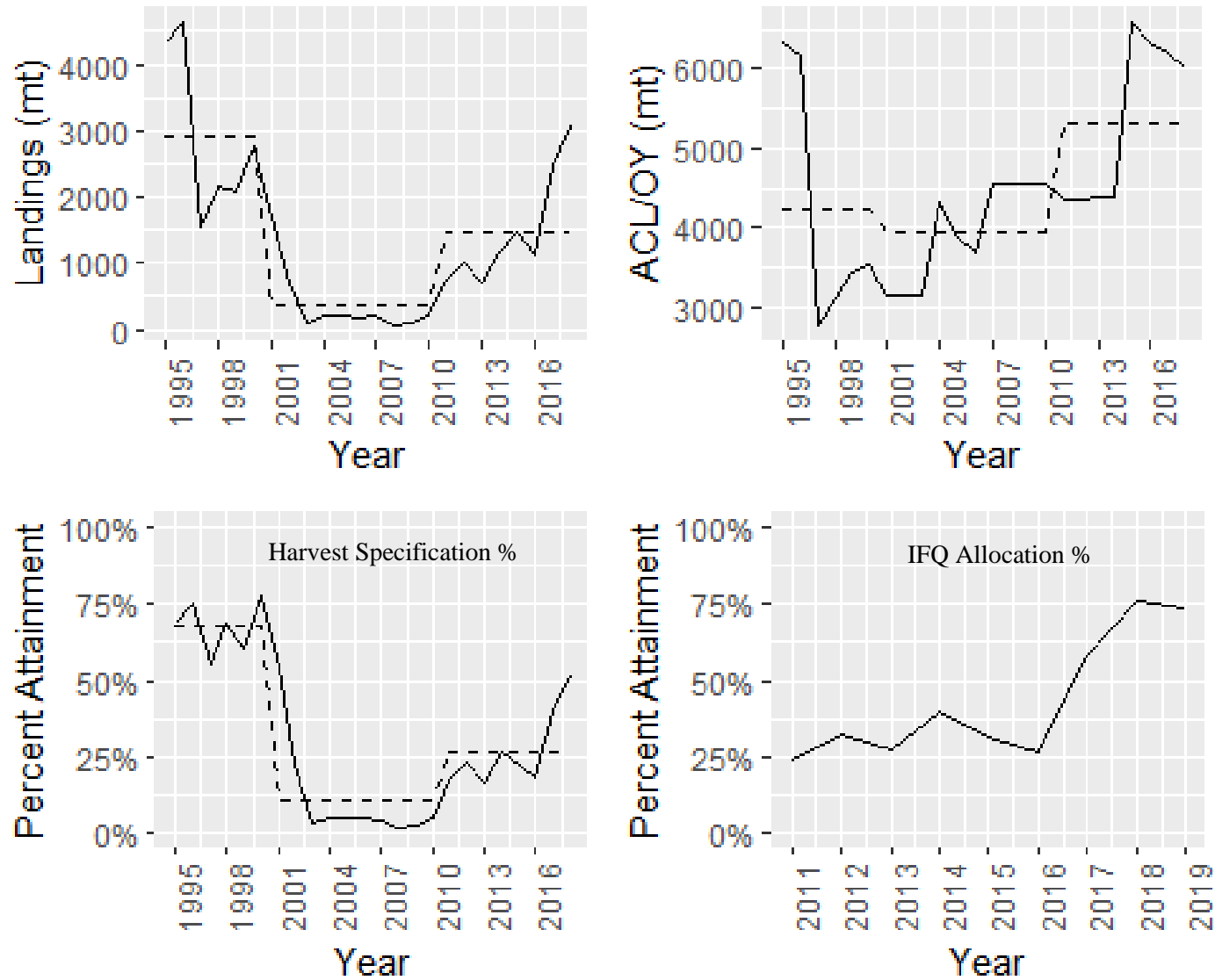


Figure 5. Landings (mt; top left), ACL/OY/HG (top right), percent attainment of ACL/OY/HG (bottom left), percent attainment of IFQ allocation (bottom right) for **yellowtail rockfish north** of 40° 10' N. lat.



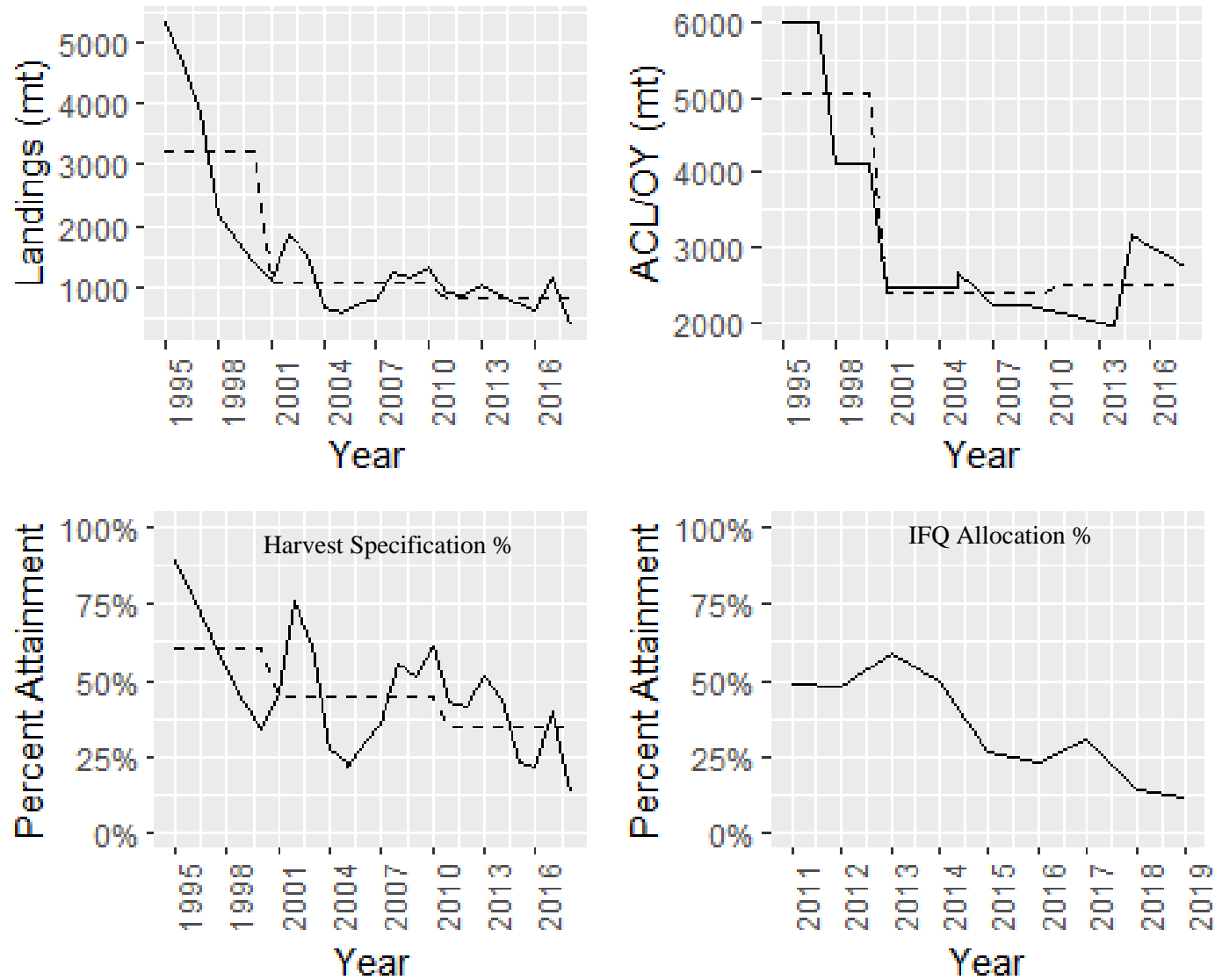


Figure 6. Landings (mt; top left), ACL/OY/HG (top right), percent attainment of ACL/OY/HG (bottom left), percent attainment of IFQ allocation (bottom right) for **longspine thornyhead north** of 34° 27' N. lat.

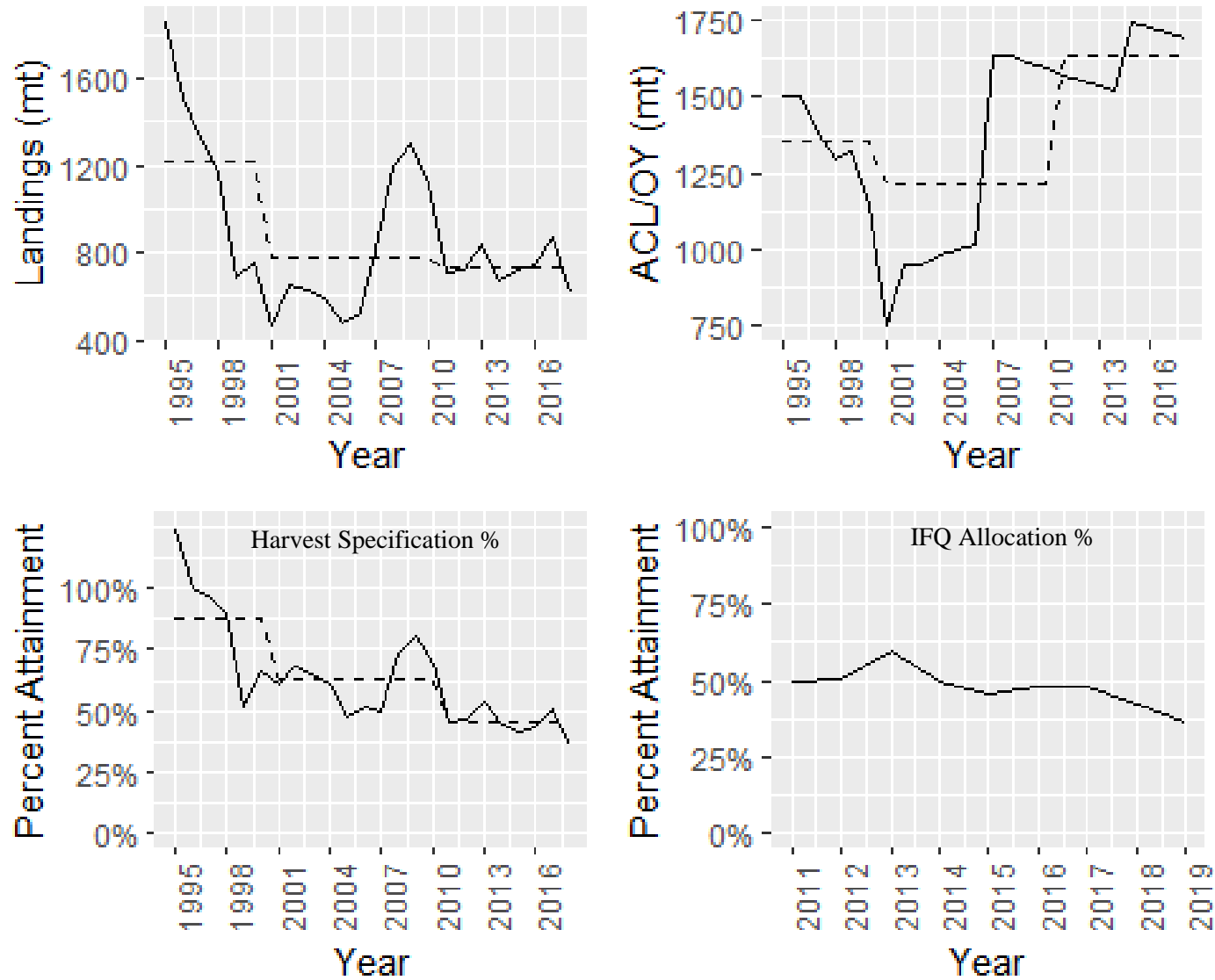


Figure 7. Landings (mt; top left), ACL/OY/HG (top right), percent attainment of ACL/OY/HG (bottom left), percent attainment of IFQ allocation (bottom right) for **shortspine thornyhead north** of 34° 27' N. lat.



Figure 8. Landings (mt; top left), ACL/OY/HG (top right), percent attainment of ACL/OY/HG (bottom left), percent attainment of IFQ allocation (bottom right) for **Pacific whiting**.